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# A Resume of Tank Development in the U. S. Army

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*An Informal Talk by the Chief of Infantry*

*The Chief of Infantry recently had occasion to make an informal talk about tanks to a group of officers who were going to Camp Meade to inspect the Tank School. His talk, which was really only an introduction to a more technical talk by another speaker, gives resumé of tank development since the World War and tells something about the new light tank TI. Omitting the introductory paragraphs, General Allen's remarks were:*

I HAVE presumed that you gentlemen know a great deal about the value of the tank as it was demonstrated in the World War on the western front. Of course, our officers, as a rule, had very little experience with tanks and practically no experience in fighting against them, as the enemy did not use them against our troops. The reason we had so few tanks was that we could not get them into quantity production, and practically all that we did get were begged from the Allied forces. It is said that General Pershing put in an urgent plea for 500 tanks and offered almost anything within his power to secure them. I believe he managed to secure in the neighborhood of 50 for the Meuse-Argonne offensive. If you will study what those few tanks accomplished in the capture of critical or strategical points, and the saving of material and personnel, you will see that the few tanks that we were able to secure paid for themselves many times over. You must bear in mind that we accomplished this with the tank as it then existed in the early stages of its development—mechanically imperfect, very slow, not at all dependable—and that we were further handicapped by the lack of any well digested tactical doctrine for the use of the tank, and by lack of knowledge on the part of our Infantry about cooperation between tanks and infantry.

General Summerall, as a corps commander, had considerable experience with tanks, and a limited number of other commanders had tanks operating with their corps or divisions. General Summerall is enthusiastic, and always has been, over the possibilities of the tank as a weapon. In fact, I heard him state not long ago that he could not conceive in future warfare of any assault infantry battalion going into action over ground where it was possible for tanks to maneuver unless the battalion was preceded by a wave of tanks. He has also stated

there is no weapon now in process of development, not excluding the airplane, that he considers of greater importance than the tank. He gives the development of the tank first in priority.

With this in view and virtually acknowledged by every one—that is, the importance of the tank—we are naturally confronted with the question of why we are still today equipped with the tanks that came out of the World War — still mechanically imperfect, not dependable, and not of exactly the proper weights. I, therefore, thought it would be well to give a brief resumé of tank development and the reasons why we are apparently lagging behind other nations, particularly Great Britain.

When we started tank development in our service after the war, the idea was to develop one tank, the medium tank, which would replace the light Mark V tank of about seven tons and the heavy Mark VIII tank of about 40 tons weight, and that we would combine in the one new tank all of the necessary characteristics of both the old ones. This was doomed to failure, as had always been attempts to combine weapons of opposed or widely divergent characteristics. Nevertheless, we had again to learn a lesson which we now hope we have mastered. The War Department, however, approved the project, fixed the weight of the compromised tank as 15 tons, and gave priority to the work of developing it.

As I see it, this was a mistake. If you should ask any commander who had extended experience in France and who knows something of the tank's capabilities and limitations, whether he, as a corps or a division commander, would choose light or heavy tanks, the answer would be light tanks. He would make this answer because he would know that he can get light tanks to the place at which he wants them when he wants them. We may, therefore, take it that the tank of maneuver warfare is the light tank and should have been the first to be produced. Heavier weapons, heavier tanks, like the heavy artillery, belong back with the G. H. Q. reserve; and it is unsound to begin developing these weapons before you equip the front-line units.

Specifications were drawn up for the 15-ton tank, but they called for many things that were erroneous and that prevented the production of a 15-ton tank. For instance, it was specified that the tank must be able to cross a nine-foot trench, so when it was developed it was about 21 feet 6 inches long. This means that you cannot load two of them on one flat car, which is in itself a defect when you consider railway transportation in a congested theater of operations. The specifications for armor required unnecessary protection against certain armor-piercing projectiles. The Navy years ago proved the fallacy of any race between armor and armor-piercing projectiles, but in developing our "land battleships" we did not follow their lead, and gave too much consideration to armor that would stop armor-piercing projectiles. Some one said, "How about armor against the .50 caliber machine gun? We must put on armor against that." "How about the 37-mm. gun?" for there were even those who said that the tank should carry sufficient armor to make it proof against a 37-mm. projec-

tile. The weight of that 15-ton tank grew to 23½ tons. It is a good tank as to maneuverability, has a speed of 10 miles or more per hour, and is dependable; its armament is strong and it is a good weapon; but it is not the weapon we wanted. If it is ever manufactured in any quantity, it will be a weapon for special situations, primarily situations of stabilization, and will belong to the G. H. Q. reserve; but I doubt very much if it will ever be produced in any quantity.

At the start of the development of this medium tank, it was insisted that a careful study should be made of the Christy principle, which, roughly speaking, is the principle of the wheel and the track. The vehicle runs on the road on wheels and, when you start across country, you drop the track and you have a caterpillar tractor vehicle. Without going into detail, all of you gentlemen who are familiar with motor-driven vehicles appreciate the mechanical difficulties of any such motor vehicle. With the added weight and lack of mechanical dependability, your gain is very small because, whether this machine is running by wheel or by caterpillar tread, every useless mile it runs on the road is using up its combat efficiency. Therefore, you gain but little when you put both wheels and caterpillar tread on the tank. We still have a few of these Christy vehicles over at Aberdeen, in the archives. They can be tuned up and will give you a beautiful "flash" demonstration, but they are not dependable, they will not "stand the gaff," they break down right along. There was a great deal of time wasted in our development of the Christy tank, and eventually we had to return to the straight caterpillar tread.

During that entire period nothing was done to develop a light tank. That was the situation when I reported in Washington in 1925. As soon as I got oriented, I turned my attention to tanks. After considerable study I took up the question of producing a light tank and giving it priority on the schedule of tank production. It took me some time to get authority to go ahead with this tank and give it its proper place in the schedule, but after many conferences at the War Department I finally got approval of the policy.

One of the unfortunate aspects of developing a new project is that many changes are involved. Changes often seem necessary even after the specifications are made, the drawings laid out, and all is ready for work. When you make such a change, even though it may be a very minor one, the production department—in this case the Ordnance Department—virtually has to begin all over again. I was told the other day that a change of one-eighth of an inch in the thickness of armor of the present tank would necessitate more than 150 new drawings, which it would take about three months to prepare. I mention these things to show you why it is that we have spent so much time without having gotten along further than we have toward developing a satisfactory weapon. When you are tempted to criticize tank development, remember that. I may add that in making criticisms you need put no blame on the Ordnance Department, for it has "delivered the goods" straight through.

When, in December, 1926, we finally

got authority to go ahead with light tank development the Ordnance Department called on me for the specifications for a light tank. These I submitted on or about January 21, 1927, and they have not since been changed. The Ordnance Department made the drawings and, in March or April, 1927, started on the production of the first of these light tanks.

Early in October I saw a factory demonstration of this new tank. After an extended service test we may and undoubtedly will find that we shall have to make changes, but we feel that we now have an excellent tank. Of course, a tank is primarily a question of chassis; the tank body is a simple matter. I rode in this chassis across country at the rate of 16 miles per hour in intermediate gear, and on the road at 22 miles per hour in high gear; and when you get that you are coming pretty near to the maximum speed of a tractor tread vehicle. At that time the tank had been run 420 miles, and in that distance the only trouble had been one broken link, from defective steel; and one man replaced this link in 20 minutes with the equipment and tools he had with the tank. That tank, in 420 miles, had been out of action only 20 minutes, and that for a minor defect. It would look as though we had produced a dependable light tank, with speed that is almost to the limit of what one can hope for, and I believe that it is a speed that is sufficient. We have apparently reached what we shot at.

Of course, this tank carries light armor. That is necessarily so. We set the total weight at six tons. I believe it will come out eventually slightly under seven tons, completely equipped and loaded. The present light tank carries either the machine gun or the 37-mm. gun. This new light tank that we are developing will carry both the machine gun and the 37-mm. gun, both weapons fired by the same man, either separately or together. With one fill it carries sufficient fuel for a cruising radius of somewhere around 75 to 80 miles, which will virtually put the tank in action at daybreak and keep it going until dark without refill. It is essential that the tank should be kept down to a weight that will allow it to be transported on the normal 5-ton commercial truck. You all know that the 5-ton commercial truck—Mack and several others, but I mention the Mack because it is in general production—is rated as a 5-ton truck, but it carries a safe load of anywhere around seven and a half to eight tons, and are all tested to ten tons. Commercially, they are generally loaded at seven and a half to eight tons, so if we keep our tank under seven tons, an ordinary 5-ton commercial truck will carry it.

There is one other matter that is of interest to all of you. That is the use of smoke with the tank. A little over a year ago the question came up as to whether we wanted a smoke producing apparatus with the tank. It was referred to the Tank School and they said that the apparatus had no place on the tank. I think it was considered from a very restricted viewpoint, that of the defensive use of smoke, and not the offensive use. They very correctly stated that the tank did not want smoke to screen itself, that it blinded the driver and, if anything, increased the visibility of the tank as

a target for anti-tank weapons. Then they discussed the utilization of the tank for throwing a screen in front of its own infantry, and came to the conclusion that they did not want it. Then the Infantry School indorsed what the Tank School had said—that we did not want smoke with the tank. I thought everybody was out of step except myself. I visualized the use of smoke on the tank as an offensive weapon. Some very prominent English authority has stated that before the World War the fundamental principles of war were fire and movement, but that since then there are three—fire, movement and smoke. The use of smoke is primarily to blind the enemy, and the tank is a means of carrying the smoke to the enemy; and I believe, so far as infantry front line units are concerned, that it will be far more effective than smoke by artillery or any other known means. If the field of fire is such that machine guns can be brought into effective action, infantry will be stopped at a range of 1,000 to 1,500 yards—it has been in the past and will be in future—and advance beyond those ranges can be made only with prohibitive losses. But if at such time the infantry is supported by tanks, such as we are developing, it is possible, notwithstanding anti-tank weapons, for these tanks to move out at their present high rate of speed and maneuverability, and advance to those areas in which the machine gun nests are located. You may lose some of the tanks, but you always lose things in battle, and the enemy is not always going to have anti-tank weapons where he can use them. When once the tanks get to the enemy, as we now conceive tank action—that they use their fire power or their crushing power to keep this hostile fire down—they put these machine gun nests out of action and enable the infantry to take up its advance. If the machine gun nests are considerably spread around, even when the tanks get up there it is going to be quite a job for them, with their imperfect vision, to find the machine gun nests, and, if they are dependent entirely upon their weapons, to keep this fire down. Then the tank will not be so very effective. But give it the added weapon of smoke, and when it reaches this area from which the machine gun fire has held up the infantry is coming, it can turn loose smoke screens and blind the enemy.

Recent tests have been made of the effect of smoke screens. First, a unit fired with rifles and machine guns at a range inside of 1000 yards and without any smoke screen, and made a certain number of hits; in other words, its fire effect had a certain efficiency, which we will say is 100. Then a smoke screen was placed in front of the targets and, with the same unit firing, the fire effect was 25 as compared with 100 without the smoke. Then the smoke was put down on the unit that was firing and the fire effect was eight as compared with 100. If you blind the enemy by smoke—not screening our own troops, but blinding the enemy—you have killed the effectiveness of his fire, and infantry can at once take up the advance. Therefore, when you give a tank the equipment to produce an excellent smoke screen, you give it an excellent offensive weapon. There might be times when you would want to use the

tank for a defensive smoke screen, but primarily it is an offensive weapon. This new tank that we are developing will have an apparatus that is attached to the tank from the outside—very light, and easy and quick to remove or replace—that will throw an efficient smoke screen for about 30 minutes. I believe we have added a very valuable offensive weapon.

I think the value of the modern tank—the tank we visualize in the future—is unquestioned and that it is the most important ground weapon that was developed during the World War. Due to the development of automatic weapons, primarily machine guns, the balance of power has practically been thrown in favor of the defensive. We must look to the tank as the weapon that will restore the balance of power to the offensive and nullify the big advantage that has been gained by the machine gun. We must look to the tank as the weapon of all weapons that will, where the conditions are such that the flanks are impregnable, prevent the type of stabilized warfare that existed during the World War. The tank is the weapon that will break stabilization and force warfare into the open. It is the weapon that will enable infantry, without prohibitive losses and without the excessive expenditure of artillery ammunition, to advance in the face of an enemy that is well equipped with automatic weapons, and especially with machine guns.

## Philippine Scouts Lead Army in Percentage of Reenlistment of Men With Former Service

OF the 68,981 enlistments in the Regular Army, including Philippine Scouts, during the past fiscal year, 30,034 were men with former service. Of these former service men, 21,847 re-enlisted within three months after discharge; 4,707 of those who enlisted in the Regular Army were of foreign birth.

It is interesting to note that of the 1,082 enlistments for the Philippine Scouts during the past fiscal year, 969 were Filipinos with former service. Of this number, 832 re-enlisted within three months after discharge. The Philippine Scouts led the rest of the Army in the percentage of re-enlistments.

# Danger Zones—Russia

## *The Union of Soviet Socialist Republics*

F. F.

A MORE perfect social order is the aim of the Bolsheviki. Their principles and methods may be wrong—most of us think they are—but the Bolsheviki are doing signal service for mankind at large by conducting the greatest social experiment the world has ever seen. For the past ten years they have used Russia, with its 140,000,000 people, as a testing laboratory for their new economic and political theories. Despite reverses and some forced compromises wth capitalistic methods, their able and energetic leaders still hold to the ideals of communism. Bolsheviki success or failure will profoundly influence all the other great nations of the world.

Since the Revolution of March, 1917, the Bolsheviki experiment has developed four distinct stages—power, peace, economic development and political adjustment. To understand these four stages, we must investigate the Communist party. That party contains many factions—some moderate, others radical—throughout the world. Its central governing body, organized in 1919 with headquarters at Moscow, is the Third International. In Russia the most radical representatives of this party, the Bolsheviki, are now in power. These radicals form a close corporation of industrial Roundheads, who have attacked capitalistic industry just as Cromwell once attacked the English throne. Their political dogmas supplant their religion; economic reform is their ultimate goal. They control the central government of the Soviet Union, and direct the Third International, which, without officially compromising the government, propagates communism throughout the world.

### POWER

Power came to the Bolsheviki in November, 1917, because they had a definite program, strong organization and able leadership. About forty years ago the socialistic teachings of Karl Marx began to filter into Russia. Acceptance of the Marxian views on the conflict between bourgeoise (capital) and proletariat (labor) led the Russian socialists to seek radical reconstruction of the deplorable economic conditions then existing in Russia. The Social Democrat party, formally organized in 1898, limited its public activities to the economic field until 1903, when it boldly entered politics with the announced intention of converting Russia into a democratic republic. Despite 50,000 arrests by Czarist agents during the next two years, socialism spread rapidly through the Russian industrial centers, and gained a particularly strong following in Petrograd. One group favored passive resistance to the government; another group, which soon developed the nucleus of a fighting organization, advocated and employed terrorist methods. In 1905 and 1906, following Russia's humiliating defeat in the war with Japan, the socialists instigated

widespread disorders. Strikes and insistent demands or reform led the Czar, in 1906, to authorize a constituent assembly—the Duma. Though the Duma had little power, its mere existence encouraged the growth of political parties, and legalized political opposition to the government. When events of the World War disclosed the utter incompetency of the Czar's government, the Duma took matters into its own hands, organized a provisional government in March, 1917, and attempted to carry on the war. The failure of the Duma conservatives, even after they granted Kerensky dictational powers, gave the Bolsheviki their chance. Lenin, their leader, promised peace and immediate division of land among the peasants. In addition, the Bolsheviki proposed:

(1) To establish in Russia a Communist government, with Bolsheviki acting as trustees for an eventual proletarian dictatorship.

(2) To foster world revolution for the universal establishment of proletarian dictatorship.

Though often dangerously threatened since 1917, the Bolsheviki have remained continuously in power.

PEACE

The road to peace led through four terrible years of war that ravaged the country and reduced it to a battered bulk. In the short period that elapsed before war engulfed the country, the Bolsheviki fulfilled their promise about the land. They confiscated all land, except that of soldiers, peasants and cossacks, and provided for its allotment to peasants. The grateful peasants, who feared the return of the former landlords, rallied to the support of their benefactors and carried them through the tumultous times that followed.

National and civil wars, which made withdrawal from conflict impossible, developed on all sides. True to their principles, the Bolsheviki began to disband troops at the front even before an armistice was signed. The Germans answered overtures of peace by advancing through province after province, until finally on March 3, 1918, the Russian peace commissioners accepted such terms as the Germans chose to dictate. In 1918, 1919 and 1920 detachments of the newly organized Red army fought against troops of Germany, Austria, Czecho-Slovakia, Roumania, Poland, Finland, France, Great Britain, United States and Japan. Not until October, 1920, when an armistice ended hostilities of the Russo-Polish War, were the Bolsheviki free to deal with the numerous civil wars that foreign intervention had kept alive. Finland, Esthonia, Latvia and Lithuania (Baltic provinces) had broken away, and had become separate independent states. In December, 1917, Kornilov, Kaledin and Dutov began their attacks on the Bolsheviki in the south. While this fighting was still in progress, troops in Siberia attacked; and the White Guard revolt began to develop in the north. During 1919, Yundenich drove in from the north, Denekin from the south, and Kolchack from the east. In 1920, the Red Army engaged Wrangel in Crimea, and Semenov in Siberia. After nearly seven years (1914-1920) of continuous warfare had reduced the country to a famine-scourged waste, peace was finally restored.

With peace came full realization of the appalling economic condition of

the country. Railway transportation, inadequate to the needs of the country even in pre-war days, was practically at a standstill. Over 3,500 railway bridges and nearly 400 depots and repair shops had been destroyed. Locomotives in service numbered less than one-fourth of the 1913 total. The remaining rolling stock had so deteriorated as to be almost useless. War measures, similar to those adopted in other countries, had kept the fighting forces supplied at the expense of all other activities, but with the pressure of war removed, even the essential industries could not obtain raw materials. The factories could produce little to exchange for the peasants' grain, and the government was hard pressed to keep the industrial workers from starving. Many of them, recruited from among the peasants, returned to the country rather than work without pay or food in the towns. The peasants had begun to view the new regime with sullen discontent. Possession of the land meant little so long as the government continued to requisition the surplus crops. The army, though not openly hostile, displayed strong sympathy for the hungry townspeople and the discontented peasants. Confronted by these conditions, the Bolsheviki were forced to retreat from the extreme communism that characterized their war measures. In March, 1921, upon Lenin's recommendation, the Tenth Congress of the Communist party approved the first move towards the New Economic Policy (NEP).

The first step of the NEP was intended to allay peasant discontent. Instead of requisitioning surplus crops, the government instituted a grain tax, and for the first time authorized private sale of the remaining surplus grain. This slight concession to private enterprise might have encouraged the peasants to raise more grain, but in that year (1921) months of drought brought crop failure to the most fertile grain fields in Russia. In the Volga region starving peasants in search of food flocked to the river banks, where typhus carried off thousands. The contaminated river waters helped to spread disease. In other districts conditions were nearly as bad; and in the towns, industrial workers were worse off than many of the peasants. To relieve these conditions, the government allowed private individuals to engage in industry and trade for profit. This extension of the NEP seemed to compromise the principles of the Communist revolution.

Sure of his ground, however, Lenin led his party into the struggle for economic recovery. Money again became the medium of exchange; a new issue of gold standard currency gradually replaced the worthless Soviet rubles, and stabilized the finances of the country. The government owned the banks and thus controlled industrial financing. The unproductive nationalized industries were reorganized into trusts, and put on a more nearly self-supporting basis. The agricultural cooperatives became huge trading concerns. Instead of trying to control the detailed operation of these organizations, the government merely held them accountable for results. The individuals who engaged in private trade (Nepmen) flourished, but even from the start they did less business than the government agen-

cies. Concessions were granted to foreign companies, but always for a restricted period of years, and under provisions that insure eventual state ownership of well-developed industries. The government retained its monopoly of foreign trade, and continued to invest heavily in nationalized industrial plants. One of the outstanding features of the new economic order is the Industrial Planning Commission. Its function is to analyze the national economic problems, and to allocate industrial projects in accordance with the needs of the people. This commission, if successful in its efforts to provide scientifically planned development in Russian industry, will undoubtedly accelerate economic progress. Year by year the subsidized national industries are gaining ground. Strict government regulations, heavy taxes on profits and lack of capital restrict the Nepmen to small scale operations. During the past three years the government agencies have steadily grown stronger, while the volume of business done by the Nepmen has decreased materially. Private enterprise is permitted to fill the gaps in the growing organization of nationalized industry. Plans calling for capital investments in 1928 of over $600,000,000 for industrial plants and equipment, indicate how determined the Bolsheviki are to communize industry.

While this industrial empire is building, pioneer conditions prevail. Housing for industrial workers is miserably inadequate, largely because an influx of peasants has nearly doubled the urban population. Town prices for food, shelter and clothing are almost triple current rates in the United States. Bureaucratic control of industry holds production costs above what the logical consumers—the peasants—can pay. Agriculture is more favorably situated, for Europe is eager to buy all the surplus grain Russia can produce. At present Russia needs cheap manufactured products. If the Bolsheviki can reduce their production costs to the level of the peasant's purse, Russia will become more self-sufficient, and European manufacturers will lose permanently a market that formerly absorbed many of their products. The Bolsheviki are straining every effort to secure capital to finance their gigantic industrial projects, and to equip established plants with up-to-date machinery. They have sold the imperial crown jewels, have sold industrial concessions and have sought to obtain loans in Great Britain, France and the United States. To maintain their power, the Bolsheviki must create industries and convert the industrial workers to Communism before conservative peasant opinion checks government expenditures. Whether the people eventually adopt the Bolsheviki theories, or impose less radical principles upon their leaders, the economic development of the Soviets seems assured. Six and a half years of the NEP have made the country almost as strong economically as was Russia in 1913.

### POLITICAL ADJUSTMENT

Political adjustment, internally and externally, is at present the most pressing issue in Soviet Russia. Within the Communist party, divergent opinions on economic matters have resulted in serious conflicts. If the party splits, civil war may follow. If the political struggle leaves the

party intact, its continued control of the central government seems assured. However, after the next elections, that control may be less rigid than formerly, for the peasants are beginning to realize their political power. Their influence, already being felt, may easily alter Bolshevik policies both at home and abroad. Their desire to insure agricultural prosperity may force the Bolsheviki to discontinue the revolutionary propaganda that has antagonized foreign nations. Developments in Soviet politics during the next six months will have far-reaching influence.

In internal politics, Soviet Russia has much in common with Italy. Both Bolsheviki and Fascisti came into power through revolution, but now each is the only legally authorized party in its country. Each is a strictly disciplined body of energetic workers, so well organized for political action that, even though small in comparison to the country's population, the party absolutely controls the government. In Russia, the actual members of the Communist party number less than one per cent of the people. To maintain their power, both parties have drastically curtailed liberal institutions, and from time to time have expelled party members who have tried to oppose such restrictions. No opposition worthy of serious consideration has as yet made its appearance in Italy; but in Russia, strong opposition has developed between radical and conservative elements of the Bolsheviki.

Trotsky, a Russian Jew, the most brilliant of the revolutionary leaders, heads the opposition. The Czarist government exiled him as a revolutionist to Siberia in 1898 and again in 1905, but he twice made his escape. About 1903, while in London, he became closely associated with Lenin. During the World War he was imprisoned by Germany, expelled from France, debarred from Spain, tolerated in United States, interned by the British, and finally turned up in Petrograd shortly after the revolution of March, 1917. He renewed his association with Lenin, became a Bolshevik, and was elected President of the Petrograd Soviet that year. In 1918 he became Commissioner of Foreign Affairs; and later, as Commissioner of War, he organized the Red Army. His unquestioned intelligence, ability as an orator and writer, and intimacy with Lenin, gave him great prestige and power. Energetic, fearless and sarcastic, he made many bitter personal enemies among his associates. Since Lenin's death, opponents of Trotsky have discredited him politically, and have expelled him from the central committee that controls the party. If General Pershing had been reduced to the grade of private in 1920, his position in our army would have been similar to Trotsky's present status in the Communist party. Although stripped of authority, Trotsky still exerts a powerful influence.

Stalin, the son of a Georgian peasant, is the recognized leader of the Communist party. Five times between 1898 and 1917 he was exiled for revolutionary activities to Siberia, but each time escaped. Always a strong supporter of Lenin, and long a member of the central committee of the Communist party, he has rendered valuable services to the party in peace and in war. He is a silent, determined man, who is admittedly harsh in his

treatment of anti-Bolshevik factions. His membership in the party antedates that of Trotsky by many years, and he regards Trotsky as an irresponsible upstart. He has won the allegiance and support of the great majority of the Bolsheviki, and is now virtually dictator of the Soviet Union.

Trotsky and his associates (Zinoviev, Kamenev, Radek, Rakovsky, Sokolnikov, and others) charge the government with failure abroad, and the subversion of Communist principles at home. They point to the collapse of proletarian revolution in China, the break with England, strained relations with France, the assassination in Warsaw of a Soviet envoy, and discord in the Third International. On domestic issues, the opposition strictures are equally severe. Improvement in the condition of industrial workers has been delayed; rich peasants are becoming richer at the expense of the agricultural laborers; unemployment is more widespread; economic and political power is passing rapidly from Communists to non-Communist groups. By capitalistic methods, the government is trying to placate industrial workers on one hand and enriched peasants on the other. Expediency, rather than the principles of Lenin, govern Stalin's policies. According to Trotsky, Stalin's political machine is stifling true Communism and betraying the cause of worldwide proletarian revolution. Trotsky would have the party become more dictatorial at home and more aggressive abroad.

Stalin recognizes the facts of the situation. He is seeking to build up economic strength, even though the resulting system is not entirely communistic. He can refer to precedents set by Lenin himself for departures from war communism. He admits that the social order has stabilized without conforming to the Bolshevik plan, but he hopes eventually to establish pure communism when the masses are educated to accept it. Throughout Russia schools for children and adults are spreading communist teachings among the people. At present the peasants, who have possessed their farms for ten years, will not accept the Communist theory that all lands belong to the state. Furthermore, the government desperately needs capital, which it must get abroad, to carry out industrial enterprises. To earn the confidence and good-will of foreign nations, so as to secure loans or commercial credits, Stalin must restrict the revolutionary propaganda of the Third International. He believes that the time is not yet ripe for worldwide proletarian revolution; he, therefore, concentrates upon consolidating Communist achievements within the Soviet Union. He prefers to put his own house in order before attempting to regulate the affairs of others. To him the welfare of Russia and the Russian people is of more immediate importance than world revolution. His policy is to be more liberal at home and more friendly abroad.

The Trotsky-Stalin controversy, having passed through several preliminary stages, has now reached a crisis. In the fall of 1926 the opposition suffered a crushing defeat, but its members continued to criticize the government in surreptitiously printed pamphlets. Secret agents of the government located the "underground"

printing presses and announced the discovery of contracts between Trotsky's associates and counter-revolutionary enemies of the Soviet Union. Trotsky has admitted his responsibility for the illegal operation of printing presses. On August 10, 1927, Trotsky and Zinoviev were reprimanded; on September 30 Trotsky was expelled from the Executive Committee of the Third International; and on October 24 Trotsky and Zinoviev were expelled from the important committees of the Communist party. The Communist Party Congress, which began its sessions on December 1, has decided to expel Trotsky from the party. It appears that Trotsky must yield or defy the party.

GENERAL CONSIDERATIONS

Events may reconcile the hostile factions. Recent Communist uprisings at Canton, China, indicate that Bolshevik-directed propaganda of the Third International is beginning to bear fruit. Stalin has consistently followed Lenin's policy that "the soundest strategy in war is to postpone operations until the moral disintegration of the enemy renders the delivery of the mortal blow both possible and easy." Developments in China may serve to ignite the inflammable material that the Third International has for years been spreading among the yellow, brown and black races of Asia and Africa. If so, Trotsky will find ample fields for activity within the party, and the party will need his services as a military leader. His intimate knowledge of the organization, war-time employment and peace-time training of the Red army give Trotsky an advantageous position. Action abroad would automatically silence all discord at home.

Is the Soviet Union prepared for war? Ever since the break with England two years ago, the Bolsheviki have conducted an intensive propaganda campaign at home to convince the people that the Soviet Union must defend itself against attacks by capitalistic industrial nations. With that viewpoint, the Russian masses would look upon any war as a struggle for existence. Industry is already largely nationalized—a tremendous initial advantage in war. The government is highly centralized. The army has over 1,000,000 men in active service, and a reservoir of approximately 15,000,000 partially trained reservists for replacements. The present leaders of the Soviet forces are the ablest survivors of at least four years of recent national and civil wars. The navy, divided into Baltic and Black Sea fleets, though comparatively weak, is, nevertheless, an important asset. The air force and chemical warfare troops have received special attention. In the hands of the Bolsheviki, propaganda has become an effective advance guard for the armed forces. Inadequate transportation and inability to manufacture sufficient quantities of essential war materials would undoubtedly handicap the Soviet armies. Russia was not so well prepared for war in 1914 as the Soviet Union is now.

We stand by to observe developments. Internally, the Soviet Union is replete with interest for those who follow economic, political and social changes. The international effects of Bolshevik policy and action are matters of immediate importance to military men. Communism is frankly imperialistic, with the world as the limit.

# Motor Equipment of the Army

Major Levin H. Campbell, Jr., Ordnance Department

WHEN he thinks about automotive development, the Infantryman is probably less interested in "what makes the wheels go around" than in just what those wheels or tracks will do in assisting him to accomplish his mission. He undoubtedly wants to know the capabilities and limitations of the various classes of automotive equipment that the Ordnance Department supplies. The automotive equipment of the other branches are probably also of interest to him, for their rate of march and ability to operate across country directly affect the help that they can give in combat. And, finally, he may be interested in a brief outline of past development and the trend of future development as the designer sees it.

In all its work, the effort of the Ordnance Department is to produce what the using services want. The designs are based entirely upon the requirements of the "customer," and the words "serviceability" and "reliability" are ever uppermost in our minds.

Unfortunately, lack of funds has resulted in little opportunity for the using services to work with modern automotive equipment. Their ideas of performance and dependability are based largely on familiarity with vehicles of 1917 and, if they look askance on the idea of motorization, it is not surprising. Their yard stick of performance of motorized equipment is the old six-ton tank and the old F. W. D. truck. Trucks that give 100,000 miles, and tractors that give 5,000 miles of service with but a reasonable amount of upkeep and repair are commercially available in large quantities. The mileage life of special automotive vehicles is constantly increasing.

All development and improvements are based largely upon manufacture of units in quantity, with tests under every conceivable condition of operation. The commercial industry each year manufactures automotive vehicles in the thousands and millions; the Ordnance Department *builds* by single units when funds are available. By the end of the present fiscal year we shall have built (not manufactured) a total of seven tanks. The engineer can usually evolve a good design, but to gain that last 20 per cent so necessary to reliability we must build and test, build and refine,

*I have read the article, "Motor Equipment of the Army" with much interest. Motorization is undoubtedly of paramount importance in the securing of modern-day mobility for our Army.*

*Major Campbell has been connected with automotive development for the past nine years, and is at present Chief of the Automotive Section of my office. His views, as expressed, may be taken as representing those of the Ordnance Department.*

C. C. WILLIAMS,
*Major General,*
*Chief of Ordnance.*

Mark VIII Tank

build and perfect. If at times we and our "customers" become discouraged and feel that our progress is slow, let us not forget the fact that we are working "under wraps."

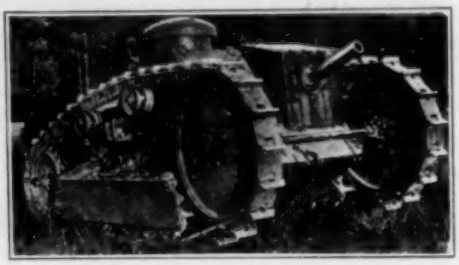
Such remarkable progress has been made in the past decade, and is being made from year to year in automotive design, that the engineer wonders at the retention of animal-drawn transportation in the Army. He feels that, with the enormous production facilities in our country, our Army should be in a most favored position. He knows that this is an age of motorization, of high-speed transportation; and he firmly believes that he has built and will continue to build such reliability and performance into his vehicles that the Army will, as business has done, motorize. We shall still use the horse, but the motor will steadily circumscribe his usefulness. The engineer knows that a motorized army is a cheaper army to maintain than is one with animal transportation, *all* factors considered. He knows that, with a construction program about to be inaugurated, and the near necessity of replacing animals, now is the time, economy considered, to work motor equipment into our organization.

6-Ton Renault Tank

The entry of the Ordnance Department into the field of automotive design dates from 1917. Shortly before that time the artillery had tested some few commercial tractors, and a small number of armored cars, built on commercial truck chassis, had been experimentally produced for use with the cavalry. Let us see where we stand today, especially as to vehicles that are of particular concern to the Infantry.

At the time of our entry into the World War, the subject of tanks was an entirely new one to the Ordnance Department, and our war-time designs were largely British and French ones adapted to our manufacturing standards. The tanks thus produced were the Mark VIII and the six-ton Renault.

The Mark VIII, of which 100 were completed after the Armistice, weighs 40 tons and is driven by a modified Liberty aircraft engine at a speed of five miles per hour. A crew of 12 men



Ford Tank

operates the tank and mans two 6-pounder guns and seven machine guns. The armor protection is from 6 to 16 mm. thick. The great length of the vehicle gives it maximum ability in crossing trenches. Its size, however, makes it an easy target and decreases its mobility. Speed is obviously one of the best protections a tank can have against hostile fire. The present trend of design is toward lighter and much faster tanks.

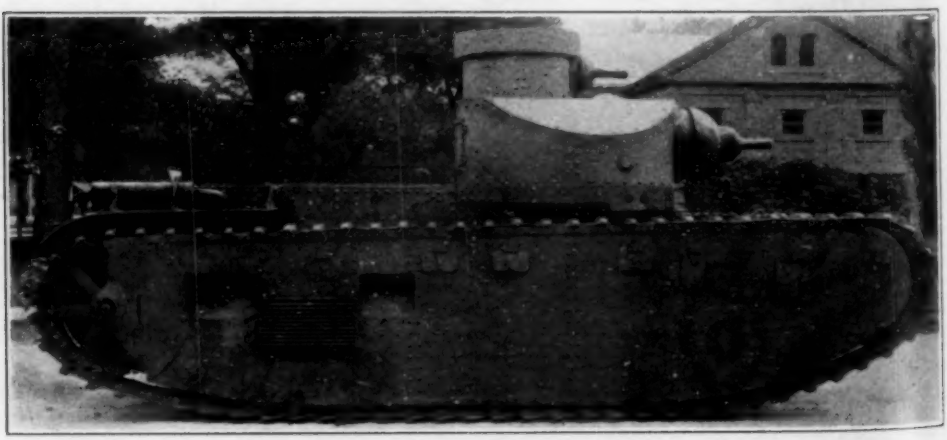
The six-ton Renault tank was produced in large numbers in this country for use in the World War. It falls short of meeting the requirements for a light tank, for it is mechanically unreliable and its speed is only six miles per hour. The crew is composed of a driver and a gunner protected by armor that varies in thickness from .25 to .6 of an inch. The armament, either a 37-mm. gun or a caliber .30 machine gun, is mounted in a turret that has a 360-degree traverse.

The Ford two-man tank represents one of many attempts that the Ordnance Department made during the war to collaborate with the commercial industry in the production of tanks. Some few of these were built during the war, but mechanical troubles, which could not all be corrected in the brief time before the Armistice, prevented the quantity manufacture of the vehicle.

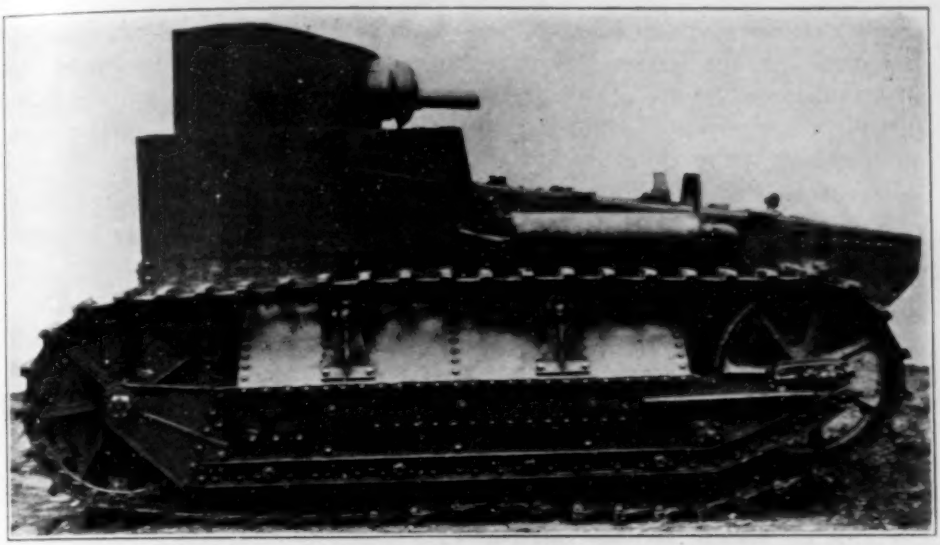
The experience with these three tanks emphasizes the fact that mechanical reliability results only from carefully thought out designs later perfected after tests. Each of the tanks is a remarkably good product when we consider that they were all designed during the stress and hurry of war, and that little or no development and test work were done before quantity production was entered upon.

After the Armistice, General Pershing appointed a board of officers, now known as the "Caliber Board," for the purpose of recommending ideal types of Army Ordnance equipment on which development work should proceed. One of the recommendations of the board was for the development of a medium-weight, high-speed tank.

The 23-ton Tank TI, now undergoing test by the Tank Board, is the



23-Ton Tank



Light Tank TI

third of this type built and incorporates the improvements found necessary in the tests of the first two. The speed is 12 miles per hour; the armor is 1 inch thick over the fighting compartment; and the armament is one 6-pounder gun and one caliber .30 machine gun in the lower turret, with one caliber .30 machine gun in the upper turret. The crew consists of a driver, a gunner, a loader and a tank commander who also fires the upper machine gun. This tank is mechanically good and appears to be well received by the Tank Corps as a fighting machine.

We feel, however, that we can produce a tank of 12 to 15 tons weight having equal or greater fire power. This vehicle would be much "quicker on its feet" and would present a much smaller target. Trench crossing ability is a function of length, but length means weight. Weight means more engine power, which immediately calls for a repetition of "the vicious cycle" of more weight. It is obviously impossible to armor against all calibers of guns unless we build "land battleships," such as would undoubtedly make their appearance in any pro tracted stabilized combat situation. These "ships" would conceivably carry large numbers of machine gunners to occupy the ground gained. Thus all design is of necessity a compromise of factors desirable and undesirable. We feel that we should constantly strive for speed and fire power, with the maximum armor protection consistent with reasonable weight.

The most interesting tank we have is the Light Tank TI. An experimental model has been completed and given an extensive test. Its remarkable mechanical performance has resulted in an enthusiastic reception of the "job," and its fire power is the maximum obtainable in that weight of vehicle. The speed is 18 miles per hour, and the cruising radius on the gasoline carried is 80 miles. The

crew—a driver and a gunner—is protected against the service rifle bullet at all ranges. In the all-round fire turret are mounted both a 37-mm. gun and a caliber .30 machine gun, with a fully adequate supply of ammunition. The mount for the guns provides for a limited traverse independent of the turret traverse, and for ample depression and elevation. The fighting compartment is completely ventilated, which for the first time insures comfort for the personnel. The mechanical control and operation are of the simplest. The commercial Cunningham engine provides ample power for any kind of terrain, and the speed of tanks over rough ground depends largely on the ability of the crew to stand punishment.

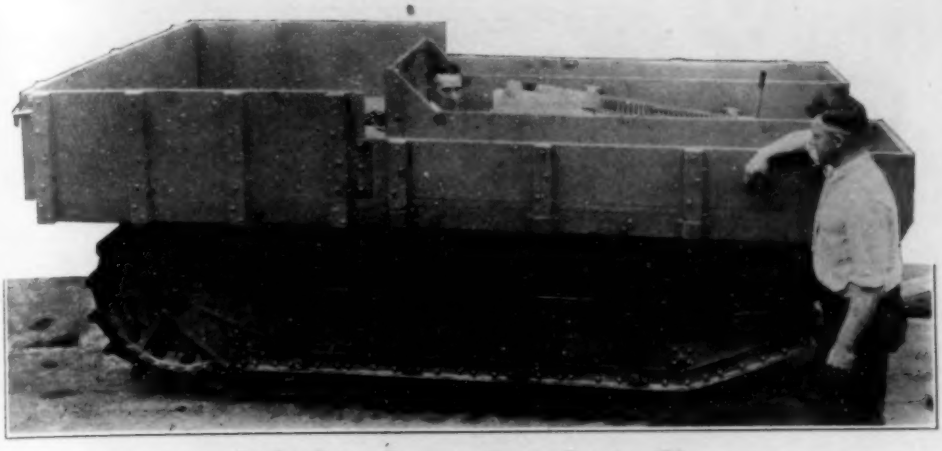
A few—four more—of these tanks are now building and will go to the service for test so that we may have the advantage of suggestions and helpful criticisms in this development. As soon as funds can be secured, at least a battalion of these light tanks should be placed in the service for tactical tests, as obviously much will have to be worked out in the correct employment of these high-speed, high-firepower little machines. They are a different "breed of cats" from the old six-tonner.

One of the most interesting features in the design of the Light Tank TI is that it is built on a basic, all-purpose chassis. This chassis may be likened to an automobile chassis on which may be mounted several different styles of bodies.

One of the service demands that has been most perplexing to us is for a cargo carrier to follow the tanks with oil, gas, water, spare parts, tools and the like. It was to meet this very real requirement, and hold to a minimum the number of special vehicles to be produced in war, that the all-purpose chassis was evolved.

The illustration on the next page shows the chassis with tank superstructure replaced with a cargo body of a capacity of from two to three tons. The model is of wood, but might as well be of steel. This body may be of a wide variety of types. We have in mind a platform body for mounting large wire reels for the Signal Corps; a similar body to carry a balloon winch for the Air Corps; a stake body for engineer equipment; a tank body for water and gasoline; a light armored body for carrying personnel, and so on. As a light, fast tractor for loads up to six tons, this unit is without a peer today. The chassis is truly an all-purpose one, and is a good production proposition with a greatly simplified maintenance as regards spare and replacement parts for the field. Even so, however, it represents only a good start. Much remains to be done to perfect the vehicle, and we need not only funds, but enthusiastic support from the using services. Apathy never leads to the advance of creative ideas; enthusiasm and *constructive* criticism almost invariably do.

One of our dreams of several years' standing (in which the British have "scooped" us) is the design of a light, fast and small armored conveyance for getting the individual over a fire-swept zone with some protection other than his skin, and with the means for maximum fire power, which is the machine gun, with him. The conveyance—call it tank or whatever you



Light Cross-Country Cargo Carrier TI

will—will carry but one man, who will drive with his feet and thus have his hands free to operate his gun. If he should wish to leave the vehicle, a pull on a pin releases the machine gun, which he may then set up on its tripod. This little tank will present only a small target, its speed will be high, and we shall at last have a highly mobile, armored machine gun. The difference in weight between a one and a two-man tank is from *four to five tons*, which would seem to be a disproportionate weight for the one additional man.

We may expect war-time losses in tanks to be high, but if a wise policy has given us enough of these machines, they will accomplish their mission. But it is also possible that the losses may not be so great, for the Chemical Warfare Service has recently evolved a smoke-producing apparatus for the tanks which may find favor with the Infantry. The use of tanks will enormously reduce the battle losses, and their early and continued employment will assure a war of movement to the side that has them in quantities.

Is it too bold to predict that, in another war, no one will willingly send the unprotected Doughboy up against a machine gun nest?

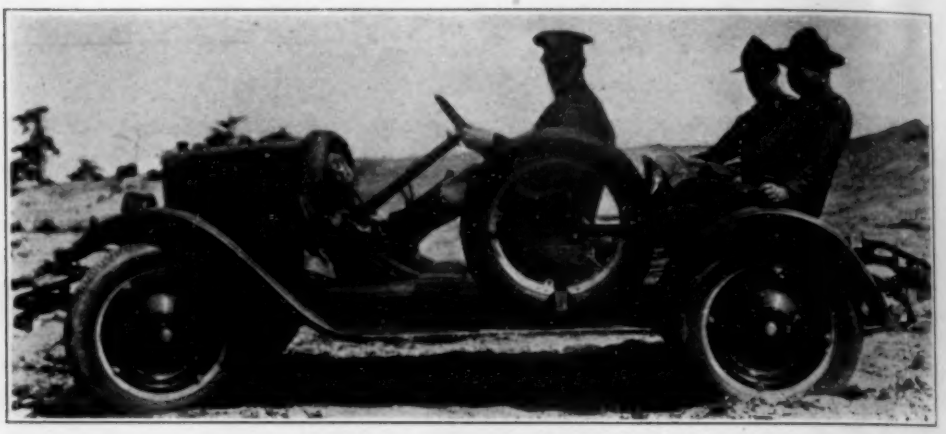
CROSS-COUNTRY CARS

Our first efforts to produce a fast vehicle for reconnaissance work resulted in a Ford car with two additional dead axles, and a fabric belt track over and around all wheels. It would cross almost anything, but its life was woefully short.

We also tried several special designs of our own with but indifferent success.

The latest type of cross-country car is a standard Chevrolet chassis, equipped with oversize balloons and light bucket seats. Some of us feel that the car has become too heavy for best results, and it is in our minds to try to bring the weight down nearer to the original car we turned out in 1923.

The purpose of light cross-country car is partially to supplant the motorcycle, to carry reconnaissance parties, to supplement the horse and replace him where possible. A small box, or



Cross-Country Car (Chevrolet)

a wire reel, may be substituted for the rear seats. The performance of the car across country and soft ground is excellent. Its reliability needs no comment. It has afforded me a great deal of quiet amusement (and secret delight) to have some of my good "horse" friends in the field, importune me most earnestly to assist in getting some of these cars to their stations. We're a cautious lot, we Army men, because we know how vitally our decisions may affect future wars, but we're headed right—for motorization! The inevitable!

CROSS-COUNTRY CARGO CARRIERS

Among the cross-country cargo carriers are several different types of vehicles: trucks, trailers, self-propelled cargo carriers, and power carts. The Ordnance Department is charged with the design, procurement and supply of those vehicles adopted primarily to move *off* of the roads, the Quartermaster Corps with vehicles that operate *on* the roads. What was that story about the care of brown bears being under one department, and that of black bears under another?

The ability of any vehicle to move over soft ground is primarily a function of unit ground pressure, and varies inversely therewith. Other factors, such as ground clearance, gear reduction, and the like also enter, but unit ground pressure is paramount.

The standard Chevrolet one-ton truck has been equipped with balloon tires and an extra driven axle, with the idea of lessening unit ground pressure and increasing "mud ability." We are about to turn out another with the largest tires the standard wheel will carry. The additional axle adds but little complications of design and delay in production. The body is our design, and comfortably seats five men on a side, or carries a load up to the rated capacity of the chassis.

For crosscountry work, a light truck is much better than a heavy one, because a squad of men can extricate it fairly easily if necessary. Heavy trucks that have to stick to roads could operate to "truck heads" (similar to rail heads), from which the light trucks or track-laying cargo carriers could operate.

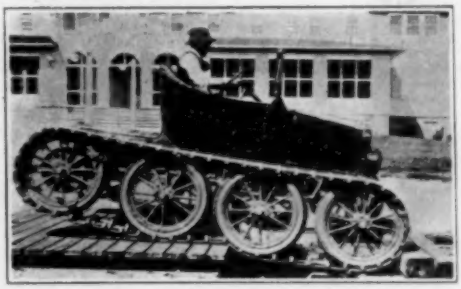
6-Wheel Cross-Country Truck (Chevrolet)

It should be accepted as axiomatic that no round-wheel vehicle is the equal of the track-laying type in negotiating "bad going." The round wheeler, on the other hand, is much more mobile on roads and hard ground, its mileage life is much greater, and the maintenance problem is far simpler. The truck is more of a "fair-weather sailor" than the track machine, and *only* by a service test under field conditions can the Army determine the proper uses of each in our organization.

Several different types of track adapter for use on heavy trucks have been tested at our proving ground within the past six years. A typical one is the 5-ton Mack truck with the rear wheels replaced by a track mechanism. Forgetting for the moment the relatively short life of this or any other adapter, the big and insurmountable fact remains that the truck is designed to drive a round wheel, and not a track machine with its greatly increased tractive resistance. In other words, in order to drive a track-laying machine, the engine and power transmission units must be built for that purpose, or failures result.

I do not believe that we have overlooked anything in our efforts to test all promising ideas, whether presented in this country or abroad. Adapters with steel tracks, wire tracks, fabric tracks, and rubber tracks have all had a full and impartial trial.

Several types of caterpillar track trailers have been built and tested, but the trend is decidedly toward the wheeled vehicle. The complication of a track mechanism and its limited road mobility outweigh its advantages for cross-country operation. Probably



Reconnaissance Car (Ford)

the ideal trailer is of the wheeled type with a smooth underbody for sledding in deep mud. If it is towed by a tractor of proper power, it will perform up to any reasonable expectation or demand. Many excellent wheeled trailers are available in the commercial market. With relatively minor modifications they will adequately meet the severe requirements of the military service.

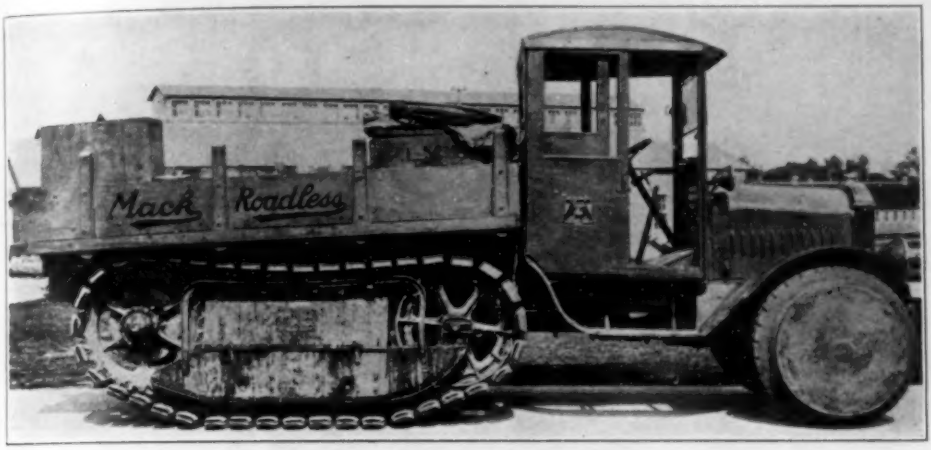
A few self-propelled track-laying cargo carriers were built and tested and, even though underpowered, were fairly successful and served to prove the entire practicability of the idea. The light cargo carrier on the all-purpose light tank chassis will, we feel, quite fully meet the requirements for this class of transport.

In our next design of a medium tank, we are going to try to provide a chassis for the carrying of greater loads, probably six to seven tons. This heavier vehicle will have the same wide range of useful service as the light cargo carrier.

The Caliber Board brought out the idea of a lightweight power-driven cart able to operate over soft ground, and to have a pay-load rating of 450 pounds. Several of the track-laying type were built, but the exacting limitations in weight to permit of "man-handling" made it impossible to build the necessary mileage life into them. Next came a four-wheel drive, balloon-tired cart. An air-cooled motorcycle engine drives this cart at a speed of four and a half miles per hour. Articulation between the front and rear axles allows all the wheels to follow inequalities of the ground, and gives excellent tractive ability. Steering is done by varying the angle between the two axles. While the performance under test has been satisfactory, I do not clearly visualize just where this transport will fit into the organization, unless it be used as a light ammunition or machine gun carrier in combat. Is not one of the faster vehicles already described as good for this purpose? If so, we can eliminate from our production problem one more unit of special manufacture. Let us not forget the importance of armor protection for the soldier in the advance in these days of the machine gun and the automatic rifle.

As is quite generally known, the Ordnance Department, working in collaboration with a commercial manufacturer, during the war designed the five and ten-ton tractors, model 1917, of which large numbers were built for towing corps and army artillery, respectively. It is of particular interest to know that, even though the five-ton tractor was designed and built in but seven weeks, none of the vehicles reached France until the summer of 1918. From the building of a pilot model to quantity production is a long step. If you don't believe me, ask Mr. Ford.

The Caliber Board recommended the development of fast tractors for the division, the corps and the army. In the three years following the Armistice, satisfactory types of each were developed, and the drawings are available. In the design of special vehicles, the Army is always faced with the problem of keeping them up to date. Funds are seldom, if ever, available, and therefore, our machines become obsolete in mechanical type and in performance.



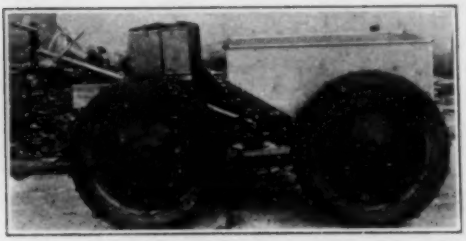

**Mack Truck With Adapter**

The delay of putting any sizeable mechanical construction into quantity production requires little elaboration here. Witness the recent delay in the case of a large motor car manufacturer, whose organization, resources and facilities are among the finest to be found. Jigs, tools, fixtures, dies, production lines, etc., have but one synonym when you're in a hurry—it is "time."

With these facts, and the heart-breaking production experiences of the World War in mind, the wise policy has been adopted of depending upon the commercial industry for the supply of tractors for the Army. While these tractors are not in all respects ideal for military uses, competition assures that they always represent the latest in the automotive art. In time of emergency, factory production can be augmented to meet our schedule of requirements. Each year, as funds permit, the department tests a few tractors so that we may keep fully informed as to available and suitable types. This applies both to track-laying and wheeled vehicles, such as the Fordson, McCormick-Deering, Topp-Stewart, and others.

Various track adapters and "trick" wheels have been tried out with wheeled tractors. In some cases the results run fair. There has also been a test of at least one foreign made tractor. In addition, there are constantly being brought to our attention, tractors that are found to be not suitable for our service, and which, therefore, do not reach our proving ground.

Our standard tractors are now the two-ton, the Caterpillar "30" (five tons) and the Caterpillar "60" (ten tons), products of the Caterpillar Tractor Co. Information is at hand that this line is also to include a tractor of about three and one-half tons weight. Under military service conditions, each of the tractors will satisfactorily handle loads equal to its own weight. They may also be "double-headed." The rate of march is about four miles per hour, but by substituting high speed gears is increased to eight miles per hour. Such speeding up of units, not especially designed for



Wheeled Power Cart

high speed, gives materially shorter mileage life than the 5,000 miles or more at the lower ratings.

MOTOR CARRIAGES

A motor carriage is, in effect, a high-speed, track-laying tractor that mounts a gun or howitzer for transport and firing. Highly satisfactory types have been brought out for division, corps, and army use, but this line of endeavor is now lying dormant, due largely to lack of funds. We feel, however, that the motor carriage has a future, and that some day it will come into its own. The thought of moving across country a division gun at fifteen miles per hour, or a corps or an army gun at ten miles per hour and emplacing any one of them in less time than it takes to determine the firing data is a most alluring one.

Of possible particular interest to the Infantry is the division motor carriage, mounting the French 75-mm. gun. The motive power is a Cadillac motor car engine, which gives a high speed of fifteen miles per hour. To put the vehicle into firing position, the brakes are set, the outriggers or struts at the rear of the tractor are quickly lowered to the ground by pulling a pin, and the mount is ready to fire. Might not this unit, provided with suitable armored shields, be of use as an accompanying gun? Does it not also provide a highly mobile unit for an artillery reserve?

Of course, all of the old arguments may be brought out—"all the eggs in one basket," "the gun is useless if the tractor breaks down," "the tractor stands idle when the gun is in place," and so on. But again, I dare the prediction that the motor-carriage will eventually have its place in our organization. Ammunition will be supplied by the light cross-country cargo carrier operating at the speed of the motor carriage.

In these pages I have tried merely to "touch the high spots." Technical stuff is usually dry reading, and I wanted to be as brief and merciful as possible to the readers who have followed through.

A committee of eminent engineers of the Society of Automotive Engineers, has, since 1919, been of inestimable value to us. All of our automotive projects have been submitted to its members at bi-annual meetings, held usually at some great plant of the industry. We have gotten lots of constructive criticism and helpful advice, and we have been given access to the latest developments in the art. We give grateful acknowledgement to this group of patriotic citizens who serve us entirely without remuneration. We have also been most fortunate in the type of automotive engineers who came into our service during the war.

Surely no one can fail to realize that we are in an age of mechanical transportation. All commercial industry is adopting motor transport in ever increasing proportion. Our reports from abroad indicate that other

armies are tending much more strongly toward motorization than we are. This country possesses an automotive industry greater by far than all the rest of the world combined, and our Army must, and will, take full advantage of our favored position.

The Ordnance Department and various service boards have made complete mechanical and performance tests of many motor vehicles. As new models come out, they will be similarly handled. Enough data have been accumulated, and it is now in order to take the next logical step. Motorization involves much more than merely putting a tractor in the place of a team of mules, or a truck in that of an escort wagon. It involves working out an organization built around motor transport; an organization that has great mobility; an organization that has fewer men. Mass is the foe of mobility. In other words, we shall have to work out a complete reorganization based upon modern transportation methods.

Further *mechanical* tests of one or two machines will now serve no such purpose; motorization is now a problem for the combatant branches to work out. I wish I could insert here an article by Lieut. Col. W. B. Burtt, Infantry, which appeared in the September 1926 issue of this JOURNAL. All officers should read it; they should study the paragraphs, "The Power of Maneuver," "Mobility Must Be Sought," and "The Action of the Future." Colonel Burtt has, in a very few words, opened up wide avenues of

**Motor Carriage Mark VII for 75-mm. Gun**

thought along which we must travel in modernizing our organization.

It would appear to be an excellent beginning to assemble a reinforced brigade consisting of units of all arms, and to equip it completely with motor vehicles. A number of reinforced battalions, with the necessary supporting non-combatant troops, organized into a brigade or a division, may be the proper composition of such an experimental force. Anything to get a start!

Whatever the force may be, its initial automotive equipment will necessarily be what we have on hand. In order, though, that all may appreciate what modern machines can do, the Ordnance Department should have a few of these available. The War Department should, then, exert every effort to secure funds for the procurement of up-to-date equipment to refit this experimental field force.

Mobility is the Thing; Motorization but the Means! *Let's Go! !*

# "Portee Cavalry"

## Captain Charles Cramer, 5th Cavalry

TROOP F, 5th Cavalry, moved by motor transportation from Marfa to Fort Clark, Texas, a distance of about 288 miles. It may be of interest, not only to cavalry officers, but also to officers of the other branches, to know that we can move cavalry (horses and all) by motor transportation as far in a day as infantry can move in the same manner, and still have the cavalry ready to move out mounted in an hour or two after unloading. In support of this statement I am going to describe briefly the trip from Marfa to Fort Clark.

The division engineers of the 1st Cavalry Division, working under the supervision of Major Mason, prepared the trucks for the trip. They built on each truck a framework of two by six-inch lumber. This railing was low enough so that the average horse could comfortably keep his head out over the side of the truck, and was high enough so that a horse could not jump out. The openings on the framework were spaced so that a horse could not get his foot through. The top rails of the frames were rounded by rasping, so that sharp edges could not rub or injure the horses' necks or lower jaws. I believe that this was better than padding the rail would have been. It was also necessary to make two sets of ramps, one of which had side rails. The ramps, which were of two and two and one-half inch material, were fastened to the sides of trucks by chains or large iron hooks, and the side rails were fastened to the side of a truck with a rope.

We wanted to put cinders on the truck floors, but they were not available, so we put on each floor one and one-half inches of good gravel with a small amount of sweepings from the picket line. This made good footing for the horses.

Twelve Liberty trucks were furnished for transporting the troop, which consisted of two officers and 45 enlisted men, with 48 horses and full field equipment. The trucks were used as follows:

| No. of Trucks | Load Per Truck |
|---|---|
| 8 | Three enlisted men, six horses and equipment of riders, carried on the partially lowered tailgate. |
| 1 | Rations and baggage. |
| 1 | Oats, spare wheels, and equipment for trucks. |
| 1 | Hay. |
| 1 | Men not carried on horse trucks, and extra equipment and baggage. |

There were also a G. M. C. truck for the officer in charge of the trucks, a tank truck for refueling on the road, and a motorcycle for the troop commander.

The troop started loading horses at the end of the troop picket line at 5.30 a. m., October 3. The horses were placed head and tail across the trucks just as we would have loaded them in stock cars. All of the horses were loaded in one hour and eleven minutes. It took five minutes to load the first truck, and from six to nine minutes each to load all of the rest except the last one. It took 20 minutes to load this truck, and most of this time was taken up in trying to load an officer's private mount.

We used both sets of ramps and loaded the trucks two at a time. The loading with the ramp that had side rails was much quicker and easier than with the other.

The truck train got under way from Camp Marfa at 6.45 a. m. and arrived at Lozier Canyon, about 160 miles away, at 9.00 p. m. The roads on the first day were excellent, the weather was fair and cool, and the horses were calm and did not cause any trouble. The only delay was that for refueling the trucks about every 40 miles, which took from 20 to 30 minutes each time. At Lozier Canyon we unloaded all of the horses in 22 minutes, watered them and fed them hay, and after 20 minutes fed them grain. They all ate very well. Careful inspection showed that nine of the horses had abrasions, more than half of which were rubbed tails and none of which were serious enough to prevent the horses from being saddled and ridden out.

On the next day we fed the horses grain at 3.30 a. m., watered them at 4.30 a. m., commenced loading at 4.40 a. m., and finished loading 58 minutes later at 5.38 a. m.

The trucks moved out from Lozier Canyon at 5.45 a. m. and had covered the 128 miles or so to Fort Clark by 6.50 p. m. The road between Lozier Canyon and Pecos River was rough and had many short, steep hills. The horses were therefore tossed around considerably and bruised to some extent. One truck had to be unloaded three times because of a horse that was down. It took 20 minutes each time to get under way again. The trip was broken by a halt of a hour and a half at Devil's River at 2 p. m. Here the horses were watered from buckets, the men had lunch and the trucks were refueled. Two of the horse trucks were delayed about an hour on account of broken gas lines and did not arrive in camp until nearly 8 o'clock. Since one of the sets of ramps was on one of these trucks, we could unload only one truck at a time. It took 25 minutes to do this, after which we watered and fed as on the previous evening.

When the horses were unloaded at Fort Clark they showed signs of what might be called "autointoxication." They staggered and walked stiff-legged for the first few yards because they had braced themselves so long in the trucks. I believe that after three or four hours all horses could have been saddled and ready for a 20-mile march without any difficulty.

The entire trip from Marfa to Fort Clark took 36 hours, but it took only 28 hours of actual running time to cover the 288 miles at an average of about ten miles per hour, including road stops. On October 5, the morning after arrival at Fort Clark, Captain Rogers, the veterinarian, and I inspected all of the horses carefully and noted the following: 13 rubbed tails, five bruised knees, five skinned and rubbed buttocks (these were all on large horses), four skinned hips, two bruised sides, one skinned hock, Captain Rogers agreed with me that all horses that were fit for duty when we left Marfa were also fit to take the field when we arrived at Fort Clark. A number of the horses had bruises from being stepped on or from kicks, but not any more than would have had them in a shipment by rail. The reason that the number of abrasions was larger on the second day than it

had been on the first was that the roads on that day had been rougher.

Captain Shelby Newman, the officer in charge of the trucks, Lieutenant Valentine, 5th Cavalry, and all of the enlisted men of both the troop and truck train were very much interested and worked hard and late to make the trip a success.

The trip taught us many things, some of which are expressed in the following recommendations that formed part of my official report:

1. That ramps be made of stronger and lighter material than those that we had, and that they have side rails or else be of the same width as the truck.

2. That the framework on the trucks be more substantial than that we had built. Especially should the front and rear ends be strong enough to prevent the sides from spreading. During the trip we had to use ropes to accomplish this.

3. That there be some provision to keep the horses at the front and rear of the trucks from rubbing, skinning, or bruising their sides. A blanket and surcingle on these horses would probably best accomplish this.

While the trip from Marfa to Fort Clark was entirely a cavalry affair, infantry officers may some day have the same problem to consider. If this short narrative of our experiences will prove of any help to them, it will have accomplished its purpose.

## Summer Camps in the II Corps Area to Be Improved

THE War Department has allotted to the Commanding General, II Corps Area, $18,537 for the purpose of making improvements at posts in his corps area where R. O. T. C., C. M. T. C. and other summer training camps are held. The camps involved in the project are those at Plattsburg Barracks, and Madison Barracks, New York, and Fort Monmouth, New Jersey.

The improvements will consist of additional bathhouses, storehouses, concrete floors in kitchens, mess halls, tent floors and general repairs for the 1928 training camps.

# Across Texas With a Portee Battery

Captain Edward F. Hart, Field Artillery

MOTORIZATION is receiving a great deal of attention just now from nearly all branches of the service. The experiences of one branch with automotive transportation may well be helpful to the others in their experiments.

The following account of the march (portee) of Battery A, 1st Field Artillery, from Fort Sill, Oklahoma, to Marfa, Texas, and return is, therefore, offered with the hope that it may contain some features of interest and value to readers of the INFANTRY JOURNAL.

The term "portee battery" seems to convey different meanings to different people. For this reason, it might be well to begin by making clear just what type of portee battery made the trip about which this article will tell. The battery consisted of the usual 75-mm. tractor-drawn material. The gun and caisson of each section were carried on a Class B truck; the 5-ton tractor on a trailer towed by the truck.

On September 3, 1927, the Commandant, the Field Artillery School, received instructions from the War Department to organize and send, by marching, a battery of 75-mm. guns to Marfa, Texas, to participate in the maneuvers of the 1st Cavalry Division, and to submit at once an estimate of cost of movement to, from and during the maneuvers. On the next afternoon the writer was designated to command the battery and was informed that the march would begin at 5.30 a. m., September 8. To organize and equip a battery in the allotted time appeared impossible; and, considering the condition of available motor equipment, the mission promised great difficulty throughout and held but little hope of ultimate success. Only the ability of the four officers designated to accompany me served to diminish the apparent hopelessness of the task assigned.

With the scheduled time of departure so near, we had to work fast. After some time spent in preparing a cost estimate, we turned to the next serious problem—organization.

Battery A, 1st Field Artillery, was selected as a nucleus. We then completed the organization by considering the requirements of a battery for field service, listing the duties or positions, and then entering the names of suitable personnel for them. There had to be drivers for the motor vehicles, and mechanics to keep the battery rolling. By late Monday afternoon we had determined the composition of the battery and the sources from which to obtain the personnel, material and equipment. The organization that we worked out proved quite satisfactory.

Meanwhile, the Quartermaster had begun to overhaul the eleven Class B trucks that we needed. There was no choice of vehicles, since the battery would have to have practically all trucks of this type that were available. Five of them were taken from storage on Monday, September 5, and in view of the limited time available, could be given only minor repairs and adjustments.

Early on Monday morning the Ordnance Department began to build loading ramps for guns and caissons and ramps for tractors, and to make and install the channel-iron guides for wheeled vehicles to be carried in trucks.

On Tuesday each officer was busy with the details of the mission assigned him. Lists of equipment, supplies and spare parts, both ordnance and quartermaster, were prepared and submitted. At conferences numerous points of the general plan were discussed and decided where possible.

The assembling of the battery—personnel, material, equipment, supplies and spare parts—consumed all of Wednesday. The trailers, which had been shipped from Rock Island, Ill., on September 3, had arrived at noon. In the absence of these trailers, it had been planned to haul the tractors on Class B trucks and have the trailers diverted to Marfa, to be picked up there. News of their arrival was most gratifying, since the difficulty experienced in loading a 5-ton tractor into a truck and the obvious danger from such a top-heavy load had caused considerable uneasiness. Also, the time that was necessary for modifying the trailers gave us an additional day for the other preparations, which could not have been completed in time to make the start as originally scheduled.

The entire day, Thursday, was devoted to completing the assembly of the battery, with the necessary supplies and equipment. As each vehicle arrived at the designated place of assembly, it was thoroughly inspected and serviced, great care being given to lubrication. By 4 p. m. all vehicles loaded and serviced, were assembled in park. The battery commander then assembled the personnel and made a short talk on the importance of the mission and the necessity for great care about conduct and appearance. The drivers of the heavily loaded trucks (with trailers) were particularly cautioned to exercise all possible care.

### THE START

At 5.30 a. m. Friday, September 9, 1927, the column left park in the following order of march:

(1) 2—Cars, White Reconnaissance. Personnel and fire-control instruments.
(2) 1—Car, Ford Cross-country. Billeting party.
(3) 1—Truck, ¾-ton, G. M. C. Battery headquarters.
(4) 1—Truck, Class B. Kitchen equipment. Towing kitchen trailer.
(5) 1—Truck, Class B. Rations and baggage. Towing water trailer.
(6) 1—Truck, Class B. Blank ammunition, miscellaneous supplies and spare parts.
(7) 1—Truck, Class B. Six motorcycles with side cars.
(8) 1—Truck, F. W. D. Gasoline and oil.
(9) 1—Truck, F. W. D. Miscellaneous supplies.
(10) 1—Car, Dodge touring. Battery commander.
(11) 4—Trucks, Class B. Each loaded with one 75-mm. (French) gun and caisson, and towing 3-inch gun trailer loaded with 5-ton tractor and ramps.
(12) 1—Truck, Class B. Loaded with two reels, artillery and wire; and towing 3-inch gun trailer loaded with 5-ton tractor and ramps.
(13) 1—Truck, Class B. Loaded with tractor parts, oil and gas for heavy column; and towing trailer and tractor as above.
(14) 1—Truck, Class B. Loaded with spare parts for Class B trucks and miscellaneous supplies and equipment.
(15) 1—Truck, F. W. D., artillery repair—fully equipped.
(16) 1—Truck, ¾-ton, Dodge light repair.
(17) 1—Truck, ambulance, G. M. C.

The column moved in three sections as follows: Items (1), (2) and (3) were the "speed column"; items (4)

to (9), inclusive, were the "light column," and items (10) to (15) constituted the "heavy column."

Naturally, the "heavy column" claimed the almost exclusive attention of the battery commander, in addition to that of the officer in charge of that section. With drivers inexperienced in handling such heavy trail-loads, it was felt that only by the closest supervision, if at all, could accidents be avoided and the march completed. I believe that I have never before undertaken a task with as little hope of successful completion. With an organization improvised in four days from units of four different branches of the service; with vehicles obtained from as many different sources and, with a single exception, all having had approximately ten years' service; with more than 1,400 miles of unknown road and two weeks of maneuvers before me, I believe that my lack of confidence may be excused without the charge of timidity.

### THE FIRST DAY

The first day's march (81 miles to the bridge on Red River at Terral, Okla.) was one of the most trying of the whole trip. The experience gained, the lessons learned, the confidence and ability acquired on this trying day served to prepare us for future days and proved of great value. From the very start it was apparent that my word of caution to the drivers of the heavy column had not been in vain. All drivers exercised great care on turns and down grades, and some were even timid. Though this slowed the march a good deal, I did nothing about it, for I was sure that we should make better time when the drivers had become accustomed to the feel of the load. "Safety First" was our motto throughout the march.

The first grade that we struck was on a paved road, and gave us some indication as to the excessive loads that the motors were carrying. But it was not until about 30 miles out, when we encountered six miles of light sand on a slight upgrade, that the matter was more forcibly brought to our attention. The sand had little effect on the passenger cars; it slowed the light column somewhat, but seldom necessitated a shift of gears; but it caused difficulty for the heavy column. Throughout the distance, the vehicles of this column had to run in low and intermediate gears almost continuously.

A short stretch of deeper sand at 54 miles gave us some more experience. Heavily loaded vehicles with standard tread and single tires passed through without difficulty. Vehicles with dual tires, such as the Class B trucks, were able to pass with considerable difficulty. The Class B trucks with trailer loads required the help of all available manpower pushing on truck and trailer to get through. One great difficulty on this kind of road was a consequence of the fact that the tread of the trailer is four and one-half inches greater than that of the rear wheels of the truck, measured from outside to outside. As a result, three out of every four wheels made new tracks and added greatly to the draft load of the truck. This difficulty was cumulative, and each succeeding vehicle found the road more difficult.

During the remainder of the day's march we ran into a great deal more sand and in some instances had to dis-

mount the tractor and tow other loads for short distances. The last vehicles of the heavy column arrived in camp at about 10.15 p. m. An inspection of vehicles showed that considerable repair work would have to be done before resuming the march. All mechanics and the battery commander spent the entire night at this work.

Besides these and other difficulties, due to roads and type of vehicle, which were experienced during the first day, mechanical troubles had kept two motor mechanics busy from the hour of departure.

### THE ROADS

Believing that the foregoing will suffice as to details, I shall now pass to the more general, and perhaps more interesting, features of the trip.

The entire distance marched was 1,457 miles, exclusive of the distance covered by the battery when tractor-drawn. Of this distance, 710 miles were on paved roads. The pavement, as usual, varied from excellent to poor. The remaining 747 miles were over what might be called improved road, varying from well-graveled highways to country roads with merely a drainage ditch. Due to the fact that the weather was dry during practically the entire trip, the roads, as a whole, were in very good condition. There were two bad detours, on one of which we had to dismount all tractors and use them to tow the trucks. Bridges and culverts were sources of considerable concern, with such heavy loads, but caused no serious difficulty.

### SUPPLY AND MAINTENANCE

The following tabulation shows the amounts authorized and expended for the various items of supply and maintenance of the column, exclusive of the cost of modifying ordnance equipment before departure:

| Items | Amount Authorized | Amount Expended |
|---|---|---|
| Gas and oil | $3,000.00 | $1,965.94 |
| Excess cost of rations | 265.00 | 67.89 |
| Bridge tolls | 150.00 | 124.00 |
| Camp sites | 360.00 | 25.00 |
| Wood and water | 100.00 | 2.50 |
| Repair of vehicles | 150.00 | 81.50 |
| Telephone & telegraph | 10.00 | None |
| Incidentals | 100.00 | 36.00 |
| Ice | 150.00 | 12.45 |

Before leaving Fort Sill, and before leaving Marfa on the return trip, we drew the nonperishable articles of rations for ten days. Perishable articles we purchased en route, for which we had $265 to cover the difference between the Government and commercial prices.

The supply of gas and lubricants caused little trouble. We had originally planned to have vehicles drive in to filling stations and load up, but after the first day we noted that this caused an appreciable loss of time. Thereafter, when camp was made, a local dealer was called upon to bring his truck to the camp and fill all vehicles and replenish the reserve carried in drums on one of the trucks. This plan frequently necessitated working rather late, but allowed us the full day for marching and was quite satisfactory.

As previously stated, the column moved in three sections and, usually, in the same order as on the first day. The day's march was governed entirely by the heavy column. No order of march was prescribed for the different columns in leaving camp—each was free to move when ready. The heavy column, unless delayed by motor trouble, usually moved out first, the other columns overtaking

and passing it at the first opportunity. Since the speed of the heavy column depended upon so many unknown factors, such as condition of roads, culverts and bridges and the amount of motor trouble, no halting place for the noon meal could reasonably be designated in advance. The lighter columns, therefore, moved at their normal speed for a distance of from 20 to 30 miles, depending upon the state of the roads, and halted to await word from the battery commander as to the point which could probably be reached at a reasonable hour for lunch. The light column, with the kitchen, then moved on to the designated place, where the noon meal was prepared. This meal normally consisted of sandwiches or other cold food, with hot coffee. The procedure for the afternoon was similar, except that the camping place was designated a little earlier, if possible, in order that an officer might precede the convoy at a greater distance and have time to arrange for a camp site and provide for the delivery of gas and oil and other supplies. Any unusual delay to the heavy column would, in this case, have to be made up by driving until a later hour. Only once during the entire trip was it necessary for an advanced element of the convoy to counter-march to the camping place, and this happened when one vehicle broke down completely and delayed a considerable part of the heavy column for about five hours.

An interesting feature of the march of the heavy column is that it was not conducted in accordance with any prescribed rules and regulations for motor convoys. It became apparent early in the march that to attempt to maintain a given distance between vehicles would result in slowing the march. Drivers were, therefore, thoroughly cautioned and given the responsibility of conducting their own vehicles at the best speed possible. Under this plan the best drivers soon got to the front and, later, were assigned permanent places in the column. Naturally, the slower and less capable drivers were to be found toward the rear. As a result, in a column of ten vehicles the leading truck was frequently as much as three miles ahead of the rear vehicle. This made supervision more difficult; but, on the other hand, it became less necessary. Also, this great distance between vehicles permitted civilian traffic to pass with ease and safety. The battery commander and the officer directly in charge of the heavy section moved up and down the line of march and, by prompt and vigorous admonition whenever they saw violations of safety precautions, soon impressed the drivers with a sense of responsibility. As an additional safety precaution, when the entire convoy or any considerable part of it was halted, several open spaces were left in the column to permit the passage of traffic, and officers or responsible enlisted men were posted to direct and control traffic. I trust that I may be pardoned if I "point with pride" to the fact that 21 vehicles of the kinds that we had marched a distance of 1,457 miles, mainly along a transcontinental highway, with not a single accident or collision.

A matter of great importance in a long march, and one frequently overlooked at the outset, is that of having

a supply of gas and lubricant available for each vehicle at all times. If the supply were carried in a single vehicle, it might easily happen that another vehicle would need a quart or two of oil, for example, and have to run for a considerable distance before being able to reach the supply vehicle. When the vehicles are heavily loaded this is particularly dangerous. Our solution of this problem worked quite well. Upon arrival in camp each night, crankcases were filled or drained and refilled; grease cups were screwed down until grease showed on the bearing surface, and cups were refilled if necessary; gas tanks, both reserve and service, were filled and closed. On the tractors the gas tanks were filled to within a gallon of their capacity, and the 1-gallon safety oil can was filled with lubricating oil. In this way each vehicle started the day with its capacity supply of gas and a small reserve of oil. Once or twice during the forenoon, at halts, gas was transferred from the tractor tanks to either the reserve or service tanks on the trucks. Also, if necessary, crankcases were filled from the safety cans. At the noon halt, reserve and service tanks and the safety cans were filled from drums carried on the supply truck. This system was found quite satisfactory and doubtless prevented a great deal of difficulty, particularly with the heavy loads. In addition to the gasoline container with which each truck should be equipped, each driver should have a short length of garden hose for use in siphoning gas from one container to another.

The route followed from Fort Sill to Marfa covered a distance of 699 miles and the march was completed on the tenth day—a little less than nine and one-half days' marching time. Returning, the distance was 714 miles and was covered in ten and one-half days' elapsed time—nine days' marching time. The greatest distance covered in any one day was 104 miles, between 6.45 a. m. and 5.30 p. m., and including a halt of 40 minutes for the noon meal.

Before concluding, I should like to offer a word of advice to those who may have to conduct a convoy similar to ours over any considerable distance. The enlisted men are apt to become so interested in all manner of other things that they will neglect their equipment. It is well, therefore, to have them pitch tents and to hold inspections of equipment tools frequently.

Finally, we learned from our trip that motor transportation can move artillery over the road much faster than it could move by marching. For infantry it will accomplish the same, perhaps with less trouble because the loads include no units as large as those of the artillery, but certainly with no less need for reasonably good conditions, careful planning and preparation, and continuous supervision.

# War As a Relic of Savagery

Lieut. Col. J. M. Scammell, California National Guard

"War is an established custom. It was begun and practiced ages ago when mankind was in a savage state. Is that a reason for nations who claim civilization to practice it?

"War has descended to us from savagery. Shall we who claim civilization continue to practice evils of savagery?"

WHETHER or not war can be called "an established custom" is of little importance. But it is very important to know that war was not begun and practiced ages ago when mankind was in a savage state. It has not descended to us from savagery; it has ascended to us up from savagery. War is a product of civilization. Without civilization war is impossible. Savages do not make war, because they are not capable of making war.

All this is heresy. Yet, such scientific evidence as we have confirms it. It has not been the view of great writers in the past and is not the view of some scholars today. But it is the view of those scholars who have studied the evidence of archaelogy and of anthropology. Herbert Spencer assumed that primitive man was a warrior. Sir Henry Maine stated that "It is not peace which was natural and primitive and old, but rather war." Bagehot concurred. McDougall today assumes this to be true.

Havelock Ellis, however, makes this point: "A little reflection might have suggested that a creature so helpless in his native state as man, and with a more prolonged infancy than any other creature was hardly likely . . . to have been the outcome of war."[1] Nicolai points out that man is, anatomically considered the most helpless of creatures. Apparently, he is not made for fighting. His teeth are not suitably arranged and his claws are rudimentary. This, however, begs the question. Primitive man possessed a jutting jaw instead of a jutting nose and possessed teeth far more powerful than those of civilized man today. Man's nails today have, undoubtedly, atrophied from want of use. Moreover, man may have taken to the trees for protection, and from that experience developed his hands with which to grasp objects, and acquired from it the tendency to walk erect—ever ready to swing aloft to safety. This freeing of the hands and their development would lead naturally to the use of artificial weapons; especially, since the erect posture would tend, with the use of hands, to develop intelligence.

What other animals make war? Nicolai says that "Except man, the only creatures that wage war, properly so-called, among themselves . . . are stags, ants, bees and a few birds."[2] But even these do not make "war properly so-called." They fight their own species; but that is not necessarily war. War implies organized hostili-

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[1]The origin of War, in The Philosophy of Conflict and Other Essays, London, Constable & Co., 1919.

[2]Biology of War, New York, the Century Company, 1919, p. 17.

ties between communities of the same species. Even ants and termites, which live in densely populated areas, sheltered by holes or mounds, while they go forth in swarms with an appearance of intelligent order, make contacts, injure and destroy one another and carry away food, probably are not making war. Experiments indicate that there is no purpose, no intelligent direction and no organization. These simple creatures act blindly and stupidly in response to physical stimuli. There is no analogy to war as far as the present evidence shows.

Man alone wages war within his own species; and only civilized man is capable of waging wars. "Peace, not war," says Wheeler,[3] "is the normal condition of the Australian tribes." What appears to us to be warfare is in reality a sort of crude juridical process. For a minor offense a punishment without the letting of blood is given. But for a serious crime, such as murder, official vengeance is sanctioned by the tribe. The kinsfolk of the injured man wreak the vengeance of the society against the offender. This act, however, is not strictly private; other than kinsman may join in without a formal invitation. This is a carefully regulated ceremonial of justice. It is not what we know as war.

Murder is not war. Murder is a form of strife; but only an organized, purposeful, sanctioned form of conflict between communities is, strictly speaking, war. War is essentially a matter of cooperation. A fighting force requires some degree of cohesion to be effective. It is manifestly impossible to have war until man is sufficiently civilized to make intelligent cooperation possible.

Long before the days of modern anthropology or modern psychology, a brilliant thinker, Colonel Ardant du Picq, who met a soldier's death in 1870, foreshadowed some of the discoveries of both these sciences. The intelligent, the strong, the forceful man became the chief or king. The king was the protector, the warrior, the champion. As sometimes in Homeric times, he fought alone. "But intelligence rebels against force; none may stand against an Achilles, but no Achilles can withstand ten enemies who, uniting their efforts, act together. Thence was tactics born, which foreordains the means of organization and of action suitable to give unity to efforts. Thence was born discipline also, which seeks to assure united effort despite the fears of the fighters.

"Until now we have seen man fighting man, each somewhat after his own fashion, as wild beasts do; seeking whom they may kill, and fleeing who may kill them. Now discipline and clearly defined tactics demand solidarity between leader and led and between the warriors themselves. And above this intellectual progress there is a moral progress . . . Honor appears: flight is shameful . . . and he who slips away abandons his leader and his comrades."

Cooperation probably preceded any clear appreciation of its benefits: those that cooperated survived; those that did not perished. Nicolai states that "the lowest peoples, such as Bushmen, Tierra del Fuegans, Eskimos, Andaman Islanders . . . always

[3]The Tribe and Inter-Tribal Relations in Australia, 1910.

live in nomadic tribes or hordes even when they have still no tendency to form families . . . Savages are in general extraordinarily gregarious." This, however, is not necessarily organization. The wolf pack is not organized. Some of these tribes, for example, the Eskimos, do not make war. They do not understand what is meant by war and the idea canot be made clear to them. On this account they are called blessed by the pacifists. But they are far from blessed. If they do not make war it may well be that they have nothing worth the trouble of going to war about, and because they have not the organizing ability or the skill of leadership to compass anything at all beyond the most primitive of human needs.

The evidence of archaeology confirms the findings of social anthropology. Before neolithic times we find no warlike weapons and no signs of the wounds of war on skeletons. Paleolithic man was primarily a hunter. A hunting population is not thickly settled and is not attached to the soil. Organization is rudimentary because no great degree of organization is needed. A nomadic society cannot accumulate much property. There was little to be gained by making war against a hunting people, especially when the population of the earth was small. We may agree with Havelock Ellis that even "Neolithic days were in the main peaceful." We may agree also that neolithic man was preparing the ground for war. Man was developing a civilization. His interests were turning to agriculture, to pastoral pursuits, to manufacturing and to trade. Populations became settled and concentrated. Wealth began to be accumulated. Avarice and envy began to work.

That man can wage deadly war with bows and arrows and with stone axes, the history of our early settlements in America bears witness. But, with such deadly tools, against equal numbers, war is more often shunned. Man prefers to make war when he can do it with relative safety. That time came for some peoples when they learned the secret of smelting ores.

The arts that have made civilization have ever been prostituted to greed and hatred. Fire can cook man's food and warm his family, but it can also burn the home or crops of an enemy. Printing has made possible a general diffusion of learning. It spreads the Gospel of Christ, while it also spreads malice and slander and lies. Tools of bronze or iron could be put to warlike uses. Metal weapons were to those of stone as the machine gun was to the flintlock. The metal workers could make not only better weapons, but also strong defensive armor. The secret of working metals gave a fearful power. Even today, with twenty centuries of Christianity behind us, we in this enlightened nation do not always use our power well. It was only yesterday, within the memory of living man, that human slavery existed in these United States. Even today there are 10,000 murders per annum in this country, 300,000 robberies or holdups, while $2,000,000,000 changes hands each year by frauds! Judge Marcus Kavenaugh has estimated that 135,000 murderers are at liberty in the United States. That is more than the total strength of the United States Army. He estimates that there are 350,000 habitual criminals at large. That is

more than the total number of policemen in the land. It will not do to sneer at our ancestors, struggling up from barbarism, if they took advantage of the power given them by organization, intelligence and superior weapons to wage war against their neighbors and to carry off their accumulated wealth.

When the mists of pre-history clear away we find the warrior doing business much as he does today. In "The Processes of History," Professor Teggart says:[1] "What we have uniformly at the beginning of the historical period in different lands is the assumption of sovereign ownership by an individual leader or king who relies upon the aid of a military group, caste or aristocracy to hold in subjection a subordinate population of which little is heard."

In fact, if we may judge from the habits of primitive peoples now living on the earth, as we rise in the scale of culture, fighting becomes more and more fierce. Savages have the reputation of being ferocious people. It is commonly thought that they are bloodthirsty and warlike. They like to appear so. It is important to them that the do seem stout and tough fellows. They leap and shout and brandish their weapons in a terrible fashion in order to make that impression. That is one reason for such antics. Another important reason is that it is necessary to screw their courage to the sticking point. Many are the devices used to that end. Magic has its place to get the aid of gods or demons and to provide charms, amulets or incantations to keep away wounds. The dance, the drum and the war cry are effective means. Stout promises serve with them also, as with their more civilized brethren. Their tactics are the tactics of Jericho: they shout, blow horns and march about until the walls of the enemy's courage fall down. Then their own goes up. Among some African tribes the war begins with insults. The armies work themselves into a rage. They draw closer—so very slowly! Finally some bold and heroic warrior heaves a weapon. But the first sight of blood sends both armies scampering away. One war is reported which lasted two years—two men were killed.

More advanced savages of today will start out by night on carefully planned expeditions. They will by surprise set fire to the huts of the enemy and slaughter the panic-stricken foes as they flee the fire; or, they will lie in wait in ambush. But the steady march of two armed forces, face to face, then breast to breast, in a death grapple is known only to civilized peoples.

Wars for booty are moderate or mild. There is no use getting one's self killed for wealth or women. But it is when men become civilized enough to come to blows over ideas that the real fighting starts. The wars of religion are notoriously bloody and cruel.

Such is the light which archaeology and anthropology, as well as history, shed upon the problem of war. We learn that wars are not diminishing in frequency, though they are in length. As a matter of fact, within the past 300 years, wars have increased in frequency as well as in the determination with which they are fought. Man

[1] F. J. Teggart, New Haven, Yale University Press, 1918.

now needs no drums, fifes or bugles to whet his appetite for war; and special means are no longer taken to screw up the courage of the candidates for glory. No longer are they driven or pushed into battle. They are led. And part of the leading lies in holding them back. The new-fledged warriors from Australia dashed ashore at Gallipoli and, regardless of their leaders, pushed ahead. They kept on going. They took on every enemy in sight until they were brought down by weight of numbers. These were the soldiers who called our troops " a little rough." I, myself, recall the words of a veteran colonel during the war. He was grumbling about the orders coming from higher authority, as old soldiers will. "They talk about teaching the offensive," he said, "but I know American soldiers. The big job will be to hold them back." That was the view of a practical soldier. It was justified by events. And the men of whom he spoke were citizens of what we like to call "the greatest peace-loving nation on earth."

War is not a "relic of barbarism." It has not "descended to us from savagery." War is a product of civilization, or, rather, a by-product of civilization. We shall not get rid of it by believing lies about it or spreading lies about it. The truth, conceivably, might help us to understand its nature and its causes. It is not a separate and distinct phenomenon. It may be doubted if there is such a thing as the abstract conception "WAR." There are wars. All are not alike. The problem is not a simple one.

And of this we may be sure: Until those who work for peace are guided by better information and are capable of something better than simple panaceas for a very complicated evil, it is our business to keep our swords sharp. Because, while we do not yet know how to prevent wars, we do know how to shorten them: by skilled and hard fighting.

## Bonus

THE War Department has received a letter from a lady who had heard that the bonus privilege had been extended to mothers of six sons. Since she qualifies under that condition, she asked for the bonus.

# Combat Practice

Captain John E. Dahlquist, Infantry[1]

LIEUT. COL. C. B. MAYNE, R. E., published a book in 1903 entitled "The Infantry Weapon and Its Use in War." He quoted therein from the Musketry Regulations of the Native Army in India, and this quotation, almost 25 years old, will bear repeating today. It reads:

"Having been taught by drill and musketry instruction how to use his arms and shoot, and the formations in which to meet his enemy, the soldier has to acquire his training for battle. . . . .

"The maneuver-ground, and not the barrack square and rifle-range, is the proper place to carry out the training for battle. Having been taught his drill on the parade ground, and to use his rifle on the range, to aim correctly and shoot as well as he can be made to—instruction of supreme importance—he must be taught the combination of these on the open plains or the hillside, according to where he may be stationed."

The above is an admirable statement of probably the most important training need for small infantry units today. The subject is known as combat practice. There is a training regulation (TR 240-20, Machine Gun Combat Practice) which serves as a guide for such training for the machine gun section and platoon, but to date no official document has anything to say of combat practice for the rifle company units.

A great number of officers in our service apparently do not realize that musketry, as it is now taught, is not combat practice, but only one of the prerequisites thereto. The machine gun training regulations (TR 240-20) give a good definition of combat practice. They say: "Combat practice of machine guns comprises the employment of their fire, under an assumed tactical situation, the enemy being represented by suitable targets." This definition can easily be changed to fit the rifle unit, and under it musketry is but an element of combat practice. If we leave out the tactical situation, a problem becomes one in musketry for a rifle unit or in direct laying for a machine gun unit. Similarly, if there is no firing, the problem is simply one in extended order. One may not think of extended order as a subject which is to be taught at any place other than the drill field, but, as a matter of fact, good extended order training requires comparatively little time there, and as much as possible devoted to exercises on varied terrain, with special attention to the use of ground and cover. The third element of combat practice is the presence of targets representing the enemy. Omitting the tactical setting gives us a problem in musketry or direct laying; omitting the firing of ammunition gives us an extended order problem; but omitting the targets representing the enemy gives us nothing. It results in a worthless problem. Three things are needed to make a combat practice problem: A tactical situation, ball ammunition, and targets representing the enemy. Without all of these elements we may have something in the way of a training subject, but we will not have combat practice. Above all things it is necessary to

[1]Captain Dahlquist, who is on his fourth year as an instructor at the Infantry School, is the head of the committee on machine guns.

realize that a rifle company that has completed only musketry instruction as laid down in TR 145-5 (Musketry) or a machine gun company that has completed only work called for in TR 240-10 (Direct Laying) has not had a complete training season.

Combat practice is the best means of instructing squad, section and platoon leaders in the conduct of fire under conditions approaching those of war. It is the only form of training in which every element except an actual enemy is present. It is, therefore, a splendid means for teaching cooperation and teamwork; and not only does it teach, but it is also an excellent test for both leaders and units. The best way to test a leader's ability to make an estimate of the situation and to control and direct fire is to give him an actual problem to solve. Combat practice is far different in this respect from other forms of training. Problems in marksmanship, for instance, can be solved by a diligent study of the present excellent regulations on the subject. No regulation, however, now exists or ever will exist which can cover all of the questions that will confront a leader in combat, whether real or simulated. But we must know about the units as well as the leaders; and combat practice offers a way for finding out whether units have properly learned the lessons of their elementary training. It shows whether or not the subjects of drill, mechanical training, marksmanship, extended order, musketry or direct laying, scouting and patrolling have been properly taught and learned. None of these subjects is an end in itself. None has value except as it constitutes a step in the progressive training of the soldier and the unit to fit them for battle. Can you imagine a good football coach who would only teach the individuals of his team the elements of football, without any practice in using all of those elements together in actual scrimmage? Yet is not that exactly what we do when we finish any training season without combat practice? And when we do this, have we a trained unit?

To have trained units, then, we should include combat practice in the training. It is obvious, too, that the subjects of pure technique should precede combat practice. In addition, officers and noncommissioned officers must have had some instruction in the combat principles of the units which they are to command. Moreover, combat practice should follow the instruction in marksmanship and musketry (or direct laying for machine gun units) as closely as possible. If, for instance, training of a regular Army unit must cease on June 1, every effort should be made to finish the company training with combat practice, providing for marksmanship and musketry early enough in the spring to allow this. In the northern posts it might be well to consider the possibility of holding the marksmanship, musketry and combat practice until the summer camps are over. In any event, combat practice should come after the elementary training.

Considerable confusion exists today concerning the units to which combat practice pertains. For machine gun companies the training regulations prescribe it for the section and the platoon. For rifle companies, I believe that the squad and the section should receive it. There are several reasons for restricting this work to

such small units. First, the rifle section or the machine gun platoon is the largest unit directly controlled by one man in battle. A rifle section deployed in a skirmish line will cover about 120 yards, and the platoon leader cannot closely control the action of two such units. Moreover, the second section in the rifle platoon is the maneuver unit and its use constitutes a separate problem. But probably the chief obstacle to platoon combat problems is the danger incident to them. A tactically sound platoon problem with ball ammunition requires lots of room. Lack of terrain and the impossibility of controlling all individuals of the platoon or larger units make the risk of accident too great. Instruction for these units, in the form of maneuvers for the platoon, company and battalion in which no ball ammunition is used, should follow the combat practice of squads and sections. Any platoon problem is simply a problem in using two sections, so it is not necessary to extend combat practice beyond the section. The machine platoon is the largest fire unit, so that what has been said above of the rifle section applies to the machine gun platoon. Combat practice problems involving the use of machine guns with indirect laying (barrage problems) can, of course, be given for the company or even for several companies. In general, however, it is wise to restrict the subject of combat practice to the rifle squad and section and the machine gun section and platoon.

The instruction which must precede combat practice has already been mentioned. The individuals in the organization should know how to use ground and cover, and how to care for, operate and fire the weapon with which they are armed. The units must understand the use of formations and the subjects of fire distribution, direction and control, and the connection between fire and movement. For rifle units this means scouting and patrolling, marksmanship, extended order, musketry, bayonet combat, and the handling of grenades. For machine gunners, it involves elementary and advanced gun drill, mechanical training, marksmanship, extended order, and direct laying.

With this all done, how can we best instruct units in combat practice? The proper use of problems, progressive in nature, is undoubtedly the way. Sand table exercises, tactical walks, and the study of the appropriate combat principles all have value. These should be given to the noncommissioned officers. However, theoretical instruction cannot take the place of problems. The final and real instruction will depend upon the solution of problems in the field with men and material present. The success or failure of a combat practice course will depend upon the careful preparation of these problems. They should be planned and prepared before the beginning of the period during which they are to be given. So many elements enter into their preparation that it is impossible to prepare on the field problems that will give the best instruction.

In the preparation of a problem for combat practice, two things are necessary. First, there must be a complete estimate of the particular situation, and, second, the problems must be written out. A consideration of the estimate of the situation that must be made will show why problems cannot be improvised on the range.

The officer who prepares a combat practice course for an organization must first consider for each problem the size of his unit and the state of its training. In building problems, he must keep in mind the mental equipment and training of the leaders who are to solve the problems. A captain must not write a problem that he himself might have difficulty in solving and then expect his sergeant to work it out correctly. This would be both worthless as training and highly detrimental to morale and interest.

Next, the officer who prepares the problems must consider the available ground. Without a doubt, lack of terrain is by far the greatest obstacle to combat practice. A Class B range is what really is needed. However, Class A ranges can and should be used. Pits can sometimes be improvised. If that is impossible, silhouette targets can be stuck into the ground. The problem does not have to be worked entirely on the range. It can originate somewhere else and develop so that the firing will take place on the range. In firing the problems, the men will at least get practice in firing at ranges that are not exactly measured for them, and in firing from places other than the prescribed firing points. The type of range available will dictate to some extent the type of battle action to be used in each problem.

Combat practice should deal with all types of battle action. The machine gun training regulation (TR 240-20) states that problems will be given in the following: Service of security, attack, defense, withdrawal, and delaying actions. For rifle units, problems in the first three will probably be enough. But of all these types of action, instruction in the attack is of the greatest importance. Too many abortive attempts at combat training start and stop with an advance guard. Training should be comprehensive and should include as many phases as possible; but when time is limited and cuts must be made, we should retain the most important thing—the offensive. However, here again the terrain must be considered. If the range to be used is on ground which will not lend itself well to a certain type of problem, it is a waste of time and probably dangerous from the standpoint of training to try such a problem there. The types of battle action which can be used on the ground available should be presented, and no others.

The phases or details of action require thought too. Should a problem start with the approach march, with the deployment, or with the occupation or position? Should it continue through one fire action to a subsequent one? The answer to these questions will depend upon a number of things. Ground will often limit the scope of the problems, but even where there is a good Class B range, other elements will call for a decision in deciding upon the length of the problem. For the first problem it is desirable to limit the action to not more than two or three things. Inasmuch as firing is always necessary, the simplest type of problem will be one that involves only occupation of position and fire action. Every problem should be constructed with a single purpose in mind. The problem should stress one or more points of technique or of combat principles. The points to be stressed will determine the scope of the problem. A machine gun problem which is to

stress the proper use of carts must call for sufficient movement to require the leader to make a decision about using carts. A problem to bring out the difficulty of shifting the fire of many men should contain several situations that require firing. The fact that combat practice is the culmination of all preceding training must not be forgotten. By starting problems with different phases it is possible to give men the complete picture of a battle, and at the same time to impress on them the purpose of the drills and instructions that they have had. It is hardly possible to do this in one long problem. The average soldier's mind will not grasp so many things at one time. Therefore, each problem should be short and, as far as possible, differ from others in the way it starts and the way it ends.

Finally, any estimate of the situation must carefully consider the tactical setting. Squads or sections of rifle units do not fight battles alone. Nor are machine gun sections and platoons complete fighting units in themselves. They are part of the infantry battalion. The success of the battalion to which these riflemen or machine gunners belong will depend to a great extent upon the way in which they play their parts. Leaders and men should all understand the purpose of and necessity for teamwork. To stress this point, each combat practice problem must be built as a part of a larger problem. In machine gun problems especially, care must be exercised that the rifle troops are represented in a logical manner. The tactical setting must be correct in all details. To insure correct tactical settings, battalion and regimental commanders should check problems prepared by their company commanders. If the combat practice problems have been carefully prepared and the tactical background for each of them has been correctly printed, the transition to battalion and regimental maneuvers will be an easy one and another link will have been forged in the chain of progressive training.

The writing of problems is not hard if one makes an estimate of the situation as outlined above; that is, if one considers the size and stage of training of his unit, the available ground, the types and phases of battle action to be stressed, the points of technique to be emphasized, and the tactical settings. In this matter, also, TR 240-20 furnishes an excellent guide in an illustrative problem. Several changes in this form have been introduced at the Infantry School, but they are all minor, and the simplicity of the illustrative problem in the training regulations has been retained.

A combat practice problem consists of two parts. Part One contains the problem itself and all information that the commander of the unit solving the problem must hear. Part Two contains the reference matter for the officer who conducts the exercise, and the instructions for the range officer. The skeleton of a problem would be as follows:

Part One.
1. Unit
2. Equipment
3. Situation 1
4. Requirement
5. Situation 2
6. Requirement
7. Restrictions
8. Time of firing
9. Remarks.

Part Two.
10. Object
11. Points for criticism
12. Preparation of range.

Most of these headings are self-ex-

planatory. Several of them, however, may well be elaborated. Let us consider a section problem.

Under paragraph 1 would simply be the statement of the unit for which the problem was written, for example, one rifle (machine gun) section of company.

Paragraph 2 would contain information about as follows: Full field equipment less rations and packs; 50 rounds of ammunition per man or two boxes per gun.

The contents of paragraph 3 would largely determine the value of a problem. The situation should contain all of the information necessary for a complete understanding of the problem, but nothing more. Information which probably would be lacking in actual combat under the assumed situation should not be given. Therefore, usually there will not be a map reference. No combat practice problem worthy of the name can be solved on a map. Moreover, the general situation will be omitted entirely or abbreviated as much as possible. The sergeant commanding a section has no particular interest in the fact that Alabama (Red) and Georgia (Blue) are at war. Whether the particular battle of which the combat practice problem is a small part is a battle between divisions, corps or armies does not affect the actions of the section leader. All that is necessary is that the situation be plainly and clearly told, that it contain all the information which the leader of the unit solving the problem would know in the actual case, and no other information be given. As an example of how a situation should be given, consider the following taken from a current machine gun problem given at the Infantry School:

*Situation.* *a.* The 1st Batallion, 29th Infantry, an interior battalion, is attacking in a southeasterly direction, on a 600-yard frontage, the left boundary of its zone of action being Bois des Tanks, Maxey Ridge, Humphreys Hill and Bouton Hill, inclusive.

*b.* The 2d Platoon, Company D, is supporting Company B, the left assault company. That company is now held up in the eastern edge of the 4th Infantry Woods by enemy fire from Bouton Hill.

*c.* The machine-gun platoon leader has guided the 4th Section from its last firing position near the lone pine tree on Maxey Ridge to this point in the draw near the narrow gauge railroad. He went forward on reconnaissance, directing the section leader to await further orders here. Five minutes later the platoon leader returned and gave the section leader the following orders:

"The enemy holds strong positions on the hill about 900 yards to the front (pointing.) Company B is held up in the eastern edge of the woods about 400 yards forward from here. Move your section to the crest of that slope (pointing to the hill in his immediate front) and support Company B by fire on the enemy. This runner will point out the enemy's positions. I am going to the other section. Any questions?"

After the situation comes paragraph 4, stating the requirement. This is a terse statement of what is expected of the leader and his unit. For example, the requirement for the situation quoted above is:

*a.* Actions taken and orders as actually issued by the section leader.

*b.* Execution of these orders by the section.

The completeness or brevity with which the requirement is stated depends upon the type of problem. In the step-by-step problems given early in course for the purpose of teaching combat principles as well as the technique of solving a problem, the requirement would be broken up into as many parts as the solution had steps. For example, the above requirement might have been stated as follows:

*a.* Orders issued by section leader for the movement of section.
*b.* Action taken by section leader in picking out gun positions.
*c.* Actions of section in moving into position.
*d.* Fire orders of section leaders.
*e.* Functioning of ammunition chains.
*f.* Actions of section in delivery of fire.

Other situations and requirements will follow the first ones. These are numbered in order and the paragraph number will depend upon their place in the problem.

After the last requirement will come the paragraphs dealing with restrictions, time of firing, and remarks. These paragraphs will contain information dealing with safety limits, amount of ammunition to be fired, meaning of devices representing targets, friendly troops and various types of fire such as artillery or 37-mm. guns if they are to be represented.

Part Two of the problem is for the umpire and the range officer. Under the first is set down the object of the problem. This statement is useful to the umpire if he is not the officer who wrote the problem. It is also valuable to the battalion or regimental commander who wishes to inspect the combat practice training of his units. A well-stated objective also helps to keep the author of problems from straying away from the purpose. The paragraph headed "Object" should state in what things the problem should instruct and in what subjects it should test. The object of the problem in which the situation quoted above was a part is stated as follows:

*a.* To instruct the section leader in the tactical handling of a section in attack.
*b.* To instruct the personnel of the section in the operation of a section supporting an attack.
*c.* To test the leader in fire direction and fire control.
*d.* To test the training of the section in the performance of its technical duties.

This paragraph heading, "Object," should not simply be a space filler. It should point the way when the problem is written and it should aid the umpire when he watches the solution of the problem.

The next paragraph should also be of great assistance to the umpire. As its name, "Points for Criticism," indicates, it is simply a recapitulation of the things to look for. It is a handy guide for umpires. It will prevent them from so closely watching one person or thing that they miss the action of the unit as a whole. It consists of a list of the salient features involved in the solving of a problem, as for example:

*a.* Substance and transmission of orders by section leader and corporals.
*b.* Reconnaissance.
*c.* Method and route of approach.
*d.* Selection of positions.
*e.* Method of going into action.
*f.* Utilization of ground and cover.
*g.* Fire direction and fire control.
*h.* Effect of fire.

The last section of Part Two, which is headed "Preparation of Range," contains all pertinent information for the range officers. Upon the care with which these instructions are prepared depends, in the final analysis, the success of the problem. Particularly is this true of the placing of targets representing the enemy and flags or other markers representing the friendly troops. This is like the stage setting for a play. Without good stage setting the best play is apt to be a failure. The instructions for range officers vary greatly according to the station, but some of the information which must always be given is:

*a.* Firing Point Area. Information as to the location and extent of firing point area.
*b.* Location of Targets. Information as to the number and exact location of targets.
*c.* Range Guards. Information as to

number necessary and special instructions to be given.

*d.* Pit Details. Information as to number necessary, pits to be occupied, time of raising and covering targets, methods of marking targets.

*e.* Representation of friendly troops. Information as to exact location and method of representation.

The above paragraphs very briefly indicate the planning necessary for and the method of writing combat practice problems. One thing remains—that is the checking. A father never sees the faults in his own son; an author never understands the ambiguity and the errors in his own problem. Let some other officer read the problem and solve it. Be sure that others understand it before giving it to your sergeants or corporals. All of this requires labor and lots of it, but the results will be satisfying, though it may not bring renown; a good baseball team, a winning heavyweight in the company, a high qualification in marksmanship give more publicity. Good combat practice will be satisfying, however, to the soldiers who crave something else than the same old drills, and to the officers, who will know that they are preparing for war on the place where it should be done, the maneuver ground.

## Facts About the Reserve Corps

THE strength of the Officers' Reserve Corps, by grades, on June 30, 1926, and on June 30, 1927, was as follows:

| | Maj. Gen. | Brig. Gen. | Col. | Lt. Col. | Maj. | Capt. | 1st Lt. | 2d Lt. | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1926 | 13 | 101 | 1104 | 3085 | 9941 | 20,384 | 24,949 | 44,252 | 103,829 |
| 1927 | 15 | 102 | 1132 | 3159 | 9903 | 20,694 | 26,917 | 48,092 | 110,014 |

Note.—Of the 110,014 Reserve officers enumerated in the foregoing tabulation, 8451 were also members of the Federally recognized National Guard.

The results from the Reserve Officers' Training Corps and the Blue course at the Citizens' Military Training Camps during the years 1923 to 1926, inclusive, as sources of procurement for the Officers' Reserve Corps were as follows:

| Source of appointment | Appointments accepted by graduates of 1923 | 1924 | 1925 | 1926 | Total for 4 years |
|---|---|---|---|---|---|
| R. O. T. C. | 3752 | 3933 | 4619 | 5319 | 17,623 |
| C. M. T. C. | 639 | 708 | 399 | 20 | 1766 |
| Total | 4391 | 4641 | 5018 | 5339 | 19,389 |

During the fiscal year a grand total of 16,889 Reserve officers underwent a period of training.

On June 30, 1927, the close of the last academic year, the Reserve Officers' Training Corps consisted of 325 units with a grand total enrollment of 108,957, an increase of 2,179 over the preceding year.—*From the Report of the Adjutant General of the Army.*

# Can War Be Outlawed?

Major H. A. Finch, Corps of Engineers

MOST men and women of today who exercise their thinking faculties, however infrequently, are ready to concede that another extensive war on the pattern of the World War, with additional barbarities and refinements in methods of wholesale killing, will destroy civilization as this generation understands the word. The attention given to this point has resulted in much discussion concerning proposals to outlaw war as a means of adjusting international disputes.

There are those who hold that war is only a symptom, and usually a symptom of injustice; as when one nation seeks to impose its will upon another or resorts to war in defense against or revenge for such imposition. Those who believe this can see no good in the proposal to outlaw war. They maintain that war, being only a symptom, cannot be outlawed, however popular this preventive may at the moment be in the public mind.

Viewing war as solely a symptom of injustice involves great difficulty in defining justice and injustice as between nations. What appears as plain "legal" right to one people will loom as the grossest outrage to another; "the legitimate aspirations" of one belligerently inclined country may lead to laying waste another with fire and sword. Nor can we say that the common conscience of mankind can be relied upon as a guide. There is no such thing to apply to the problem of war. Unfortunately, consciences are not standardized; they are often subordinate to strong emotions, and only the sturdiest variety can make itself heard above the shouting of patriotism.

Calling war a symptom leads us to false conclusions. Would it not be far more accurate to say that war is simply a means to an end, an instrument of national policy, a custom sanctioned through centuries of international usage?

We need an accurate definition of the phenomenon of war at this stage of the world's progress, when so many people are urging that this "instrument of national policy" be outlawed. Since 1918, outlawing war has been a favorite prescription. Originally credited to Mr. S. O. Levinson of Chicago, the idea has been enthusiastically endorsed by many men of prominence, including Doctor John Dewey and Senator Borah. Our State Department is even now considering a proposal to outlaw war between France and the United States.

Now, if war is only a symptom, whether of national injustice or international imbecility, we cannot effectively outlaw it. One cannot banish malaria by banning the chills and fever. One can, however, abolish methods; one *can* change customs. Suppose we examine the proposal to outlaw war, assuming that it is not a symptom but the disease itself.

According to Mr. Levinson the three essentials for effectively outlawing war are these:

(a) Outlawry of war by international treaties.

(b) Codification of international law on on the basis of the illegality of war and of the equality of nations before the law.

(c) Establishment of a World Supreme Court with affirmative jurisdiction, i. e., the power to summon before it an offending nation for judgment upon the petition of a complaining nation, and to decide upon the merits of the case. Such jurisdiction would distinguish the Court from arbitration tribunals, including the existing World Court, which have no such power.

In Mr. Levinson's phrase to outlaw war is to make "a fundamental psychological change in regard to the whole question of war and peace"; while arbitration is but "a makeshift arrangement within the war system." Practically all international disputes are involved in this plan for outlawing war, including even those that are domestic in character, on the ground that other means of adjustment will be devised if war is eliminated, and that it is better for the disputes to remain unsettled rather than resort to war for such settlement.

Now, cynicism is common enough among members of "the alleged human race," in which good and evil are so thoroughly jumbled. It is easy to be cynical at the expense of anything great or good—easy and cheap and non-constructive. But productive thought means real labor. As George Creel has it, thinking takes hard work, but a prejudice is a pleasure. With this caution in mind the average man may not be so ready to ridicule the idea of outlawing war. He may not be so prone to dismiss the suggestion as "idealistic bunk."

The idea of outlawing has not "caught on" with any marked success. Doubtless the main reason for this is the fact that innate in the average man's conception of law is the idea of power behind the law to enforce it. Remove the respect for such enforcing power, and there is nothing in law itself which compels observance by the potential lawbreaker — individual or national. If, in our present stage of development, there are always potential lawbreakers among every people, however homogeneous the national populations may be, is it unreasonable to assume that would-be lawbreakers will always be found among the decidedly heterogeneous family of nations on this not inconsiderable planet?

Are not the advocates of outlawing war asking us to run before we can walk? If we could now outlaw war forthwith, could we not *inlaw* morality just as easily—and usher in the millennium? If we cannot, with all the legal machinery of the Government at hand, completely outlaw liquor among ourselves, how shall we outlaw war between ourselves and a neighbor whose economic interests run counter to ours?

The difficulty lies just there, in economic interests. The causes of war are not hard to trace, but they are enormously difficult to eradicate. International trade is a prize over which nations have forever wrangled. One nation's meat may be another's meat as well—and there may not be enough meat to go around. The French wine producer bitterly resented our economic experiment with prohibition. What to him was our increased industrial efficiency if it meant the ruin of his vineyards? Says Paul Harvey, the lecturer, "for the causes of war we must look deeper than militarism and national greed, for under these are the fear of scarcity and the pressure of numbers upon supply in European and Asiatic countries.

. . . The hatreds, the greeds, the animosities and the fears which are the causes of war will not be removed until the well-being of the common man in Europe and Asia is improved."

But, argues the outlawry advocate, other evils have been outlawed—duelling, slavery, piracy—why not war? The answer is easy enough. In individual countries certain obvious and controllable wrongs have been abated by law backed by force. Duelling is prohibited in many progressive countries, but the "field of honor" is sanctioned in others that claim to be just as progressive. Slavery has been eliminated by certain nations, each in its own time and in its own way. Russia, the "outlaw" nation of today, freed her serfs in the 1830's and postponed a revolution. Thirty years later our own country fought a bloody war to accomplish the same result. Piracy still exists in some quarters, but it has largely been put down by concerted action of the Powers—mainly through suspending the pirates by the neck until they were dead. Law backed up by armed steamboats did the business. And about the only justifiable satisfaction that the advocate of outlawing war can derive from this operation is the reflection that nations have shown that they *can* combine for common beneficial action—when the evil threatens all and is great enough to inspire a common resentment or a common fear.

This business of the fighting man strikes deep. In an essay of 20 years ago Dr. William James asks the question: "Can nothing that is great be *suddenly* accomplished save by war?" To this query we can as yet only shake our heads, sadly or sagely, each according to his temperament.

But the world does progress. Nations formerly gloried in war; in Bernhardi's phrase it was laid upon them as a national obligation to engage in war periodically to offset the enervating effects of peace. Today, however, we see Germany struggling to escape from the stigma of guilt for the crime of 1914-18. Already we are observing the beginning of what may prove to be "the fundamental psychological change" desired by Mr. Levinson. This much is encouraging even though the period of waiting may be long.

Because we can see no immediate prospect of effectively outlawing war is no cause for pessimism over the eventful elimination of this grotesque survival of barbarism. The very persistence of the opposition, and the wide publicity given discussions that deal with outlawing war, arbitration and disarmament are indications that the thought of the people of the progressive nations of the world is deeply stirred by the problem of preserving international peace.

So, we are not yet prepared to accept the conception of a world supreme court with an army and navy to enforce its decrees, this is no reason why we cannot visualize it—and the visions of one century may be the actualities of the next.

# Smoke

Major Owen R. Meredith, Chemical Warfare Service

THE capture and occupation of ground, or the threat thereof, remain predominant considerations in battle. There is no absentee method of occupying ground, and hence little danger that ground forces will be displaced, however important special destructive agencies may be or become. Nevertheless a real danger lies in either neglecting new means and methods or in counting upon them too heavily.

The worth-while specialist is an enthusiast, and as such exaggerates the importance of his activity. The cold steel, dyed in the past conservative is likely to sacrifice many lives and much treasure in an orgy of stubborn tenacity to methods and procedure which have gone before.

A reasonable amount of exaggeration is good in the case of new and partially tried developments, if for no other reason than that it helps insure against neglect. Training in many matters is accepted as a routine operation. Assuming that anything has passed the purely experimental stage and possesses strong probabilities of importance in its relation to other agencies of war, any training directives and studies that make it appear as a routine matter invite and receive neglect. Not until the general employment and application of new developments are well understood and have a definite place in the scheme of things, are responsible officers justified in leaning upon routine. This status is not reached at high speed.

An aim of all infantry attack is to close on the enemy without ruinous losses. The basic purpose of all mobile agencies is to assist the Doughboy in his aim. I conceive of no better way to advance without ruinous loss than to advance without being seen—particularly by those who deliver small arms fire. These things are fundamental, as is also the fact that elements must train together if they are to fight well as a team.

Smoke is relatively new as a tactical measure. It is far from experimental and is considerably neglected in the training necessary to insure reliable assistance for furthering infantry attacks. Technically, there are many, many ways of delivering smoke, and in passing it is well to note that the same is true of gas.

Artillery use of smoke fillings is well established as a means to blind hostile observation, but this employment is none too likely to have a major bearing upon the Doughboy's actual advance. Furthermore, the artilleryman himself is loath to give up explosive for smoke, even though the smoke material may be a very effective casualty agent. In any event the artillery and other ground methods of projection are far less effective than the airplane for various smoke purposes. A field for ground smoke projection will remain, but at present, and probably for all time, aircraft are supreme for large-scale screening in mobile operations.

One plane in one minute can drop a smoke curtain that extends one mile. The time during which such a curtain

would be effective varies, of course, but for a division front one squadron of planes can establish and keep a screen effective for one-half hour.[1]

How long a defending force will wait in comparative darkness for a superior one known to be closing in is problematical. How long the screen will be needed is also problematical, but there is nothing problematical in the view that combined training is necessary if we are to keep abreast or ahead of the procession.

Two canards about smoke have been common, and as objections to its use still find followers. One is that it draws fire, and the other that it cannot be controlled so as not to interfere seriously with friendly forces. The first is rather silly and at once suggests placement where wanted and let fire be drawn. It is possible that one might be happy to see all enemy fire go into the smoke. "Our men got across the open in the assault with hardly a casualty, entirely owing to the smoke-screens. The smoke drifted in a thick bank towards the enemy. It completely hid our people from the Hun machine guns, and in addition the Hun thought we were advancing behind the smoke, which he shelled heavily, and also poured rifle fire and machine gun fire into it. Everyone was delighted with the smoke and wished we always had it." Secondly, why not use smoke frequently and extensively enough to find out what happens? If it can be cleared away from any locality in a short time by the simple expedient of not releasing any more, the problem does not seem complicated.

As predictions go, it is assured that many operations will be conducted in smoke, our own or the enemy's and probably both, and it behooves troops to practice. There will be a visible and tangible fog of war in future battles. "The motor launches which put up before the enemy's eyes this barrier against visibility, were strung out from two miles along the coast to right in to the shore, and therefore full in the muzzle of the enemy guns, one shell from which, hitting a launch, would have been enough to blow her out of existence. . . . Searchlights peered inquisitively about trying to pierce the fog wall the motor launches had built. . . . Amid the hell of shrieking projectiles it seemed that no vessel could live, yet the smoke screens served their purpose so admirably that the Germans fired right over our ships, being unable to range them with accuracy."

Will a smoke screen along an enemy's front enable attacking infantry to advance 100 yards in one minute or in ten minutes, by relatively large elements or by infiltration, and to arrive well organized or thoroughly scattered? No one knows, and at the present rate not many will find out before Rome becomes a republic. That this and similar smoke matters deserve serious thought and training are beyond question. They are new, expensive, and relatively untried in peace or war. Wars and peaces have been lost because waits for trying were too long. Smoke may not lose a war but it certainly will not help win one on any "let George do it" plan of preparation and use.

[1]These are estimates, but probably very conservative ones.

The rapidity of an advance and the number of casualties when things are hot depend upon the degree of fire superiority. Fire superiority may be obtained by greater accuracy, or greater volume, or both. There are indications that smoke on the firer reduces his accuracy more than does smoke on the target. If so, "smoke superiority" merits a place in our calculations for fire superiority. The above remarks are elementary and obvious, and use fire superiority in a restricted sense. Even so, an occasional check upon the obvious may bear more fruit than joining in the search for jokers and deep stuff, and there is a bit more elbow room.

How far and how rapidly and accurately troops will advance through smoke to the waiting and unseen reception by defenders must be answered at the time. Assuredly they will go better by knowing that their casualties are reduced by such means, that the smoke is a worse menace to defenders than to them, and if they have trained well in and with smoke.

An attack which arrives at short range of or even nearer the objective well organized and controlled should succeed, and with relatively few casualties. A procedure to accomplish the first part is to move unseen, and smoke is an answer — not experimentally, hesitatingly, and sparingly, but with knowledge, confidence, and on a scale that replaces hope with assurance.

These remarks merely touch on the use of smoke. They do not mean to minimize an enemy's activities to prevent all that an attack attempts.

Many attacks have gone wrong because of lost direction and control. Troops lose their direction lines, stray from their sectors, intermingle, and otherwise get out of hand. Caught in this situation by a heavy volume of accurate fire, the immediate issue is not long in doubt. However improbable may be this state of affairs, it becomes quite possible by a defensive use of smoke which clears away and presents inviting targets at destructive ranges.

Attacking troops arriving at wire and machine gun protective lines of a well organized position may find themselves hopelessly lost in a cloud of smoke and subject to ruinous losses from small arms fire.

Landing operations may be seriously and injuriously affected by a defensive use of smoke which obscures landmarks and beach lines and adds increased confusion to other difficulties.

The accepted doctrine that screening smokes have their greatest application in offensive operations is sound, but the other side of the question will bear thought and training.

The idea of protection against bombing raids by means of large scale screening from air observation was advanced during the World War. One plan was to have smoke emitted by chimneys during the approach and presence of air raiders. Rather fantastic, but perhaps not at all impossible. How definitely and easily could vital parts of Washington be located and how effectively bombed if from all buildings arose dense columns of smoke?

Like other matters involved in war, the proper use of smoke is not a "penny ante" game, and in the usual case cannot be expected to stand alone.

Exception is rarely found to the

belief that screening smokes will find broad use in future battles. It seems equally rare to learn of small units receiving training in such use of smoke. For several years smoke has had a part in shows and demonstrations, but largely as a spectacle. These operations have and have had excellent value in awakening interest among higher ranks, but possibly so much towards strategical and tactical matters involving large forces that minor tactics are being neglected.

The platoons, companies, and battalions (and these are the units that win or lose battles) need frequent and definite smoke experience. To be comprehensive this must involve both offensive and defensive employment. Meager means of smoke production greatly curtail this phase of training, and regardless of local desire, but even a pound of screening can now be used to better advantage than watching it burn.

The Infantry is most vitally concerned with the tactical use of smoke and, in the final analysis, as in the past, will find itself holding both the bag and the contents.

## There Is Life in the Old Horse Yet

THOUGH the Army conducts extensive experiments in motorization and mechanization, the horse still remains an important factor in military organization. During the past fiscal year the Army had 40,000 animals, or one to every three and three-tenths men. In the Civil War the proportion was one animal to every three and three-fourths men.

# Military Training in the Universities and Colleges

Lieutenant Garrett B. Drummond, Field Artillery Reserve

WE may rightly pay tribute to the memory of Justin S. Morrill, one-time Senator from Vermont. It was he who sowed the seed from which has grown our program of national defense.

The Morrill Act of July 2, 1862, was the precursor of the acts that created our present Reserve Officers' Training Corps. Previously, in 1858, the law had passed Congress, only to be vetoed by President Buchanan, who claimed that it carried no provision for the States which might subsequently enter the Union. In the early days of the Civil War the law again found its way to the executive desk, and there received the approval of Abraham Lincoln. This initial law was supplemented by the act of 1883, the Morrill Act of 1890, and the Nelson Amendment of 1907. These subsequent acts did not change the basic provisions of the law, but increased the many advantages accruing to the several States thereunder.

In all probability, Senator Morrill did not dream that his act of 1862 would become such a contribution to our national defense as the system that it established now is. Urging the passage of his proposed legislation, Senator Morrill declared it to be the intention of the act to establish schools "upon a sure and perpetual foundation, accessible to all, but especially to the sons of toil, where all the needful sciences for the practical vocations of life shall be taught; where neither the higher graces of classical studies, nor the military drill our country so greatly appreciates, will be entirely ignored; and where agriculture, the foundation of all present and future prosperity, may look for troops of earnest friends, studying its familiar and recondite economies, and at last elevating it to a higher level, where it may fearlessly invoke comparison with the most advanced standard of the world."

Speaking in later years at the Vermont Agriculture College, Senator Morrill said that "the fundamental idea was to offer an opportunity in every State for a liberal and larger education to larger numbers, not merely those destined to sedentary professions, but to those much needing higher instruction for the world's business, for the industrial pursuits and professions of life." It appears then, that the advancement of agriculture, and not the cause of national defense, was paramount in the mind of the author of this piece of legislation. The original Morrill Act provided for the "endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts."

Within the first 25 years after the passage of this act, 48 colleges received aid under its provisions. Of

this number, 33 owed their very existence to land grants and this aid.

For fifty years no definite steps were taken to standardize the instruction in military tactics at these institutions. The schools fell into two general classes. Those of one class made conscientious efforts to provide military instruction on a high plane. The others merely tolerated the military departments, and added nothing to their prestige or efficiency. Many college heads immediately grasped the opportunities to secure for their institutions the benefits that resulted from the institution of military training. "Such a measure," said one president, "is founded upon patriotism and common sense." General Francis A. Walker, president of Massachusetts Institute of Technology, announced that whether the question be "looked upon from the point of view of one interested in the political, military or naval history of our land, the subject concerns the defense of the country."

To remedy the evil of the indifferent colleges, the Association of Land Grant Colleges in 1913 authorized its executive committee to exercise influence with Congress and other authorities in Washington toward strengthening and increasing the efficiency of the instruction in military tactics at the various institutions. The result of this effort "to secure uniform instruction in tactics" was General Order No. 70, War Department, 1913, which governed the methods of instructions until the establishment of the R. O. T. C., and which is now the criterion for all schools that receive aid under the provisions of paragraph 55c of the National Defense Act, but do not possess units of the R. O. T. C.

It was to all of these institutions we had to look for officer material when our participation in the World War loomed near. An appraisal of the output of schools that had military departments was made early in 1915. In the ten years before nearly 45,000 graduates had gone out from these institutions. Their value, however, could not be placed very high, principally because the War Department had not kept in touch with them and kept up their interest in things military.

The record of these schools from 1905 to 1915 was as follows:

| *Year* | *Students Under Military Instruction* | *Military Students Graduated* |
|---|---|---|
| 1905 | 17,835 | 2,441 |
| 1906 | 18,138 | 2,890 |
| 1907 | 21,616 | 3,073 |
| 1908 | 24,101 | 3,441 |
| 1909 | 25,222 | 3,789 |
| 1910 | 27,122 | 4,215 |
| 1911 | 28,843 | 4,700 |
| 1912 | 29,979 | 4,757 |
| 1913 | 30,872 | 5,153 |
| 1914 | 31,911 | 4,970 |
| 1915 | 32,313 | 5,200 |

Testifying before a committee of Congress in 1916, President James of the University of Illinois urged that these military schools be granted an increase in equipment to make it at least equal to that then being issued to the National Guard, and that the students in these colleges be granted allowances for uniforms and subsistence.

The result of such agitation on the part of the heads of a large number of these military schools was that the National Defense Act of September, 1916, contained a definite system of civilian military training in schools and colleges. This act, with its amendment in 1920, established the

R. O. T. C. and created the present organization, "a senior division to be composed of units of the several arms, corps or services established primarily in collegiate institutions; and a junior division to be established in other public and private educational institutions."

Our entry into the World War hampered operation under the new system. In 1916 there were 106 institutions maintaining military departments, 52 of which were land grant colleges. There was a total enrollment of 35,000 students, and 62 active officers and 32 retired officers were assigned as instructors.

Abnormal conditions resulted from the emergency of 1917-18. In the summer of 1918 it became evident that officer personnel for the proposed divisions would fall short by approximately 90,000. The solution to the problem that this created was sought by utilizing the colleges and universities as graders of personnel and feeders to the officers' training camps. Accordingly, on August 31, 1918, the Selective Service Act of May 18, 1917, was amended so as to create the Student Army Training Corps.

Five hundred and twenty-six units were soon established, with an enrollment of 165,000 students. By October 1, this agency began to deliver candidates to the officers' training camps, and at the moment of the Armistice there had been forwarded to these training centers more than 4,000 future officers.

For a discussion of the spread of military training among the universities and colleges, the period of the Student Army Training Corps can hardly be regarded except as a hindrance. The responsible heads of most educational institutions were engaged in war activities, and had not had the opportunity to observe the advantages that accompanied the military organization of the student body. Also, and with due respect to the large number of excellent officers engaged on this duty, there were many instances in which the commandants of the local units were not of the type to inspire confidence of institutional authorities in military personnel.

The incident is recalled of the acting president of a university who was confined in the guard house overnight because he was challenged upon his own campus and did not establish his identity to the satisfaction of the members of the guard, he remained under lock and key until the commandant, who was a butcher in civil life, returned from an all-night party. Today that institution, which is a large State university, is justly proud of a good sized and efficient unit of the R. O. T. C. as the result of the striking personality and consistent effort of the officer who was at the head of its military department in 1920.

In 1919-20 there were 377 officers on duty with units of the R. O. T. C. In 1920-21, this number had increased to 480; in 1921-22 to 773; and in 1922-23 it was 766. The present academic year is requiring the services of 641 officers; nearly 700 noncommissioned officers, and about 600 other enlisted men.

The National Defense Act amendment that created the R. O. T. C., and subsequent regulations of the War Department have served to add prestige to the military departments. Colleges

are realizing more than ever the valuable training for professional pursuits which contact with the tools of defense automatically imparts. Students are aided in their efforts for education because of the monetary allowances from the Government. Contacts made at summer training camps are the means of broadening the outlook of many students.

A study was recently made of 83 institutions that provide military instruction. Of these, 62 were public (of which 49 were land grant colleges) and 21 were private colleges or universities. Sixty-six of the institutions (58 public and 8 private) require as a minimum a two-year basic course in military training. Seventeen other institutions (4 public and 13 private) provide military instruction either as electives or as optional with physical training.

The policy among these institutions about credits toward graduation for military training is varied. The number of semester hours credit allowed varies from two to twelve. Eleven institutions (eight of them public and three private) allow military training as a major elective subject in a four-year course leading to a bachelor's degree; and ten (nine public) allow it as a minor elective subject for the same purpose. Eleven institutions (nine public and two private) allow military training as a group elective; 22 institutions (16 public and 6 private) allow it as a free elective; and five public and two private institutions allow it as an alternate elective.

Within the past few years there has been no little agitation about compulsory military training in the land grant colleges. Adherents of the scheme have cited the act of 1862 as making military training compulsory in those institutions that accepted the terms of that law. The Department of the Interior has issued a ruling on this subject which reads: "Military training, according to the Federal law, is clearly placed in the same category as the other branches of learning which are named. Instruction in military tactics is obviously a requirement on the States, as are the other branches which are mentioned. It does not appear, however, from the Federal legislation that instruction in military tactics is any more obligatory on the individual student than is instruction in agriculture or mechanic arts. . . . The policy of the Department of Interior has been that the State fulfills its obligation under the law when it offers instruction and provides facilities for instruction in the branches of learning specified in the land grant college legislation." Only one institution, the University of Wisconsin, has thus far undertaken to remove the compulsory element of its instruction in military tactics.

There is little need to fear the agitators who oppose military training. Just so long as a twentieth amendment does not remove the words "freedom of speech" from the Constitution, there will be a certain class that thinks that it must exercise that prerogative. We may continue to depend upon the level headed type of college student to support military training, just as in war we must look to them to help lead our citizen army.

The recent action of the Mid-West Student Conference at Champaign, Ill., may be taken to show how the thinking college student views military

training. Only one dissenting vote was recorded against a resolution that referred to the R. O. T. C., stating that "we think it is the best system of national defense that our country has ever had, or that has been proposed to date, and we firmly believe in the value of military training as a molder of character and leadership, and in physical and mental development; and we do hereby heartily endorse the National Defense Act in its entirety, and do hereby declare ourselves willing and eager to come to the defense of our flag, in any capacity, in case of necessity; and further, that we look with disfavor upon pacifist organizations and similar groups which attack and attempt to destroy our present system of national defense."

To realize that the R. O. T. C. is justifying its existence, one need only associate with its members during their periods of active duty training, observe their conduct, and most especially note the manner in which they handle the technicalities of their branches. Even at the risk of appearing to be disloyal to West Point, let the writer give it as his fixed opinion that while a graduate of the R. O. T. C. is not possessed of such fundamental discipline and is not as well grounded in the history of war as a graduated Cadet, he excels a newly commissioned West Pointer in intimate knowledge of the weapons of his own branch, especially of the artillery, and in how to use those tools.

In the not too distant future the products of the R. O. T. C. are going to be the very essence of our citizen army. Just as soon as these emergency officers, whose only schooling is that received during the recent affair across the seas, have ceased to be in the Reserve Corps, the young men who are now in college will find themselves the heart and soul of that Corps. We need more of them. At least here is one Reserve officer who hopes that his battery will be chock full of 'em the next time the caissons start rolling along.

## A Good Effect of R. O. T. C. Training

EVERY now and then something comes up to confirm us in beliefs that we hold. We believe that the R. O. T. C. camps benefit the candidates mentally, morally and physically. The following letter to the War Department indicates a better outlook in an R. O. T. C. boy after going through a camp:

"At the close of the R. O. T. C. camp I turned in several articles of uniform belonging to me personally, keeping the articles issued to me by the quartermaster. It also did this to some extent while in school.

"I estimate that the loss to the Government would be covered by $50. Accordingly, I send herewith a money order for that amount. The matter should have been attended to long ago; I am sorry that I failed to write sooner."

# "It Ain't Going to Rain No More"

Lieut. Col. LeRoy F. Smith, Infantry Reserve

THE opponents of our present military policy may be roughly divided into three groups:

1. Those who are sure that "it ain't going to rain no more."

2. Those who think that the umbrella of National Defense is no protection against war showers.

3. Those who are subtly trying to bring about bad weather, and who are desirous of having this country unprotected when the storm breaks.

Reserve officers and other patriotic and well-informed citizens need waste no time in trying to convert the members of Group 3 to a support of national defense. The more you adduce proofs of the efficacy of a well-supported peace establishment to stave off war or to render abortive an attack if it should come, the more eager Group 3 becomes to break down your influence, for a national defense against war is counter to their plans.

Group 1—Those who try to "kid" themselves and the rest of us into the notion that wars are over forever, at least so far as the United States is concerned—may be found in some cases amenable to the arguments of history and of current events. By and large, these folks live in a world surrounded by a pink horizon prettily ornamented with garlands of orchid-colored pansy buds. Their perspective is distorted; to their minds, six or seven decent neighbors peacefully gathered in their parlor for tea is an infallible proof that the world is at peace and that hatred and strife and ambition and Mars died of old age on November 11, 1918. They look indulgently down upon the local Guard company, drilling its head off on Tuesday evenings, as high school lads look down on little six-year-old Willie when he sits on the floor making "choo-choo" trains out of spools and pasteboard boxes. The whole thing is so silly and futile, you know; but, of course, it serves to keep Willie out of mischief.

The process of teaching this group of folks the truth about the present and probable future state of affairs is a rather difficult one, but it is a necessary job, and one which confronts us all at times.

Pulling an ostrich's head out of the sand is attended with much effort, particularly when the ostrich has had his head in the sand so long that the sunlight hurts his eyes. In 1914 an American manufacturer, who had paid infinitely less attention to the trend of world affairs than he had to his own business, conceived the idea that it would be a fine thing before he passed away to establish universal peace on the earth. And so he called together a group of ostrich idealists, gave them a bunch of money and told them to go out and secure world peace. He even believed that they would not need all the money for that purpose, and so he told them that after they had established world peace they might give the money that was left to the poor. Then these airy Utopiates, thrilled with the idea, and tickled pink with the pocketful of money to spend, called a world peace conference of all the nations. Smelling the bank roll from afar, the

peace delegates came. They arranged, through the kindness of the Kaiser, to hold their meeting in Germany; and the Kaiser sent his own chaplain as a delegate to their conference. And while they were meeting in Germany, with the Kaiser's chaplain in their midst, the German army invaded Belgium! And the Kaiser, in consideration of their idealism, sent the delegates safely out of Germany in the very last public passenger train which crossed the border before the doors closed!

But today there are folks—these Group 1 folks—who think that because a tree fell on me last week, there is absolutely no chance of my getting a splinter in my toe from now on.

Group 2—People who believe that the more locks you have on your barn, the easier it is for a thief to steal your horse. Or, rather, they think that when a thug sees a squad of stalwart policemen on a street corner, the thug is irresistibly tempted to bump off a citizen, just for the "kick" he gets out of it. They say that we get into wars because we are prepared to defend ourselves in war. You may call their attention to the fact that this country has been embarrassingly and egregiously *un*prepared for every war in which it has been engaged, from Lexington to Versailles. No matter; your historically supported argument will get no farther into their domes of thought than a mosquito's bill will get into a chrome steel safe. Somebody with a compelling voice and a frock coat told 'em that defense measures encourage attack, and they have written it down in their diary with india ink.

These three groups are a problem. Basal metabolism tests and thyroid treatments would help some; but we have, unfortunately, no compulsory medical service in this country.

But there is a class of citizenry that is amenable to straight-forward argument supported by facts; and it is the duty of all believers in national defense to explain their point of view to this class. We refer to that great body of citizens, constituting at all times the preponderating majority of our population, who, while fundamentally sound in thought and loyal in heart, are in times of peace only very slightly interested in those departments of their governments which are designed to preserve that peace or to restore that peace should it unfortunately be lost.

These citizens are willing to do their duty to perpetuate their nation's healthy existence, but they are very prone to think that their nation is an automatic, self-perpetuating mechanism which requires no attention on the part of the mass of its citizens. These folks would bravely fight a wolf which had walked into the sheepfold, but they would not take any pains to keep the sheepfold gate shut, nor would they, even with the gate wide open, think to have a club handy.

They are the class that Patrick Henry had in mind when he said: "It is natural for man to indulge in the illusions of hope, and men listen to the voice of that Siren until she transforms them into beasts."

These citizens are they upon whom rests the fate of the National Defense Act and of its faithful execution by their representatives in government. The alert patriot has weighing upon him the present duty of insuring that

the lackadaisical patriot contributes his support to their common country's various institutions.

Every nominal patriot who fails to vote on election day casts one-half a ballot for radicalism. Every nominal patriot who sees military training attacked, and supinely sits still hoping that right will somehow prevail, is giving aid and comfort to the enemy. And, believe me, the enemy acknowledges that aid and comfort with great glee in his executive sessions and even in his public press.

The persuaded patriot must also be a persuasive patriot, else his patriotism is buried in a napkin.

Not calumny; not vituperation; not any of the villification or of the mendacity and chicanery which our enemy constantly employs against us, are we to use. Our cause is just, and our fight may, therefore, be clean—*must* be clean. But fight we must, for we have no reason to believe those fatuous folk who have been "kidded" into believing that "It ain't going to rain no more."

## The Army Goes to Church

THE Chief of Chaplains reports that 1,780,578 persons attended 21,208 formal religious services during the fiscal year of 1927. During the same period Army chaplains officiated at 581 marriages, 1079 baptisms and 1283 funerals.

# New British Infantry Views

## Captain X

A RECENT edition of Army Orders, published at the War Office in London, contains changes in the British Field Service Regulations and Infantry Field Training pamphlets.

Our cousins over the seas have ever been stronger believers in the efficacy of auxiliary arms than we. The Gatling gun may have been our invention, and the Maxim gun, too; but the British used both of these against natives in India, Africa and China long years before we had so much as a platoon of machine gunners in our service. The British "Infantry Training" manual, for instance, says (vol. II, sec. 21): "The machine gun is the most valuable of all the weapons used in defense against infantry." While we have still been insisting that the rifle and the bayonet are the paramount weapons, the fundamental basis of successful war, and putting our rifle companies in, as Colonel Short has shown, and then letting the machine gunners find what places they can, the British have been saying that on defense one object of artillery fire is to "force the enemy into the arcs of fire of the machine guns."

Now come new orders. One passage (FSR, ii, sec. 13, and IT, ii, sec. 8) of the old regulation said:

"The rifle and the bayonet are the principal weapons of the infantry soldier; in the last resort the battle can be won only by their means."

The recent changes alter the second clause to read:

"The victory can be completed by means of these weapons only."

That as is at once apparent, expresses a great change in viewpoint. The new reading of the second clause gets away from such omnipotent boasting as caused an officer to call the bayonet the chief weapon of the Army. It recognizes the value of artillery and of machine guns. It still clings to the trusty rifle and bayonet for the finishing touches. But the bayonet, according to the newest British doctrine, does not do the whole work, it "completes" what the other weapons have made possible by dulling bombardments, damaging barrages and overhead fire to cover the foot sloggers' movement forward.

A distinguished British military critic has written in a personal letter:

"The situation here is: The manuals teach one thing and the progressives in the army practice another thing, while the great body of soldiers offer passive resistance to new methods. . . . As one of the Old School myself, I detest everything new and wish 'progress' had stopped in the sixties. I am never tired of preaching that the deadly shooting at Fredericksburg and similar battles was due to the backwoodsman's instinct to kill what he shot at, coupled with the inevitable toil of loading again at the muzzle after shooting, which made soldiers even hesitate to discharge the piece unless they felt sure of the bag. In these days when any ass can pull the trigger of an automatic and waste small arms ammunition by the cart load, I fear that shooting as an art is perishing."

Such remarks are quoted not for their accuracy—for they are blind, prejudiced, conservatively inaccurate—but to indicate the resistance to progress which exists in other armies; a resistance which is even frankly admitted by those few of the old school with intellectual honesty enough to admit their prejudices.

On the defensive the British have had a trick system. They have drawn a broken line across their front and have said: "That is the line where the enemy must be stopped!" Now both the Field Service Regulations and the Infantry Training manual express a new conception. The broken line has disappeared from the plates. The references to "the general line in front of which it is intended to stop the attack" have given way to the phrase "the foremost defended localities." Out in front are observation and local resisting troops. These retire under heavy pressure, in accordance with the exact instructions of their higher commanders. When they are back beyond what we in America would call the "main line of resistance," then the fire of all arms is coordinated in front of the main zone. These foremost "defended localities," it will also be noted from the new version of the British manual and regulations, are situated "sufficiently in advance of ground suitable for observation to provide adequate protection for the zone of observation posts which the artillery requires." Our American habit has been to twist and bend our main line of resistance along the military crests of high ground. The British seem to desire high hills for artillery observation, with more nearly flat ground in front. In other words, the Americans are still thinking of stopping the enemy with rifle fire against advancing red coats up the slopes of Bunker Hill, while the British are thinking of laying tremendous weight of artillery shell-metal, using their auxiliary weapons to break up the foe, and saving the rifle and bayonet men for the counter-thrust which will hurl the attackers back in complete confusion.

"The front line of the main zone," the British books used to say (FSR, ii, sec. 99; and I. T., ii, sec. 20), "will usually be the line in front of which it is intended to stop the enemy's attack." This bald way of saying that the forward troops need not defend the ground on which they stand, has been erased from the British books. It is bad for morale to tell a soldier such a thing. Give him his instructions when the time comes, but do not indoctrinate him with the idea that he is a retreating soldier from the first.

Behind that line, the British had their broken line, the line which should not break, the line which must be held at all costs, the broken line that has disappeared from the plates. This is the way the regulations used to state it (FSR, ii, sec. 91, and I. T., ii, sec. 20):

"The first consideration will be to determine the general line in front of which it is intended to stop the attack. All the defensive preparations must be made to insure the development of sufficient fire power to stop the enemy in front of this line, and to have reserves immediately available to drive him out should he, nevertheless, succeed in gaining a temporary footing in it."

This is the way the new orders state it, and the change is very significant:

"The first consideration will be to determine what ground is vital to the

conduct of the battle. This decision having been made, the defensive position will be selected. There must be a clear conception in the minds of all commanders as to the foremost line of defended localities in front of which the attack is to be stopped, and arrangements will be made to develop sufficient fire power for this purpose. Reserves should be immediately available to drive the enemy out should he, nevertheless, succeed in gaining a temporary footing in the position."

These new passages are well worthy of study. They indicate a new theory on the defense of an area. They indicate far more thoroughly than do our regulations the idea of centers of resistance. We speak of centers of resistance, and then in the pamphlets, printed and mimeographed, in the text and in the plates, we speak of "main line of resistance," "support line," "battalion reserve line" and "regimental reserve line." We have had less experience than the British in thoroughly organized defensive positions. Our faith in the rifle as a shooting weapon is probably no less than theirs, and our performances with it are no more signal than those of the "Old Contemptibles." But their more prolonged contact with position warfare has naturally made them think of positions, while we still retain the idea of lines, the line of minute men at Lexington, the close lines of the Civil War period, the lines at El Caney, and the lines of the 1911 drill regulations. Perhaps we may some day come to agree with the British that "the machine gun is the most powerful of all infantry weapons" and also that a piece of ground "vital to the conduct of the battle" is better held by "defended localities" than by line on line on line on line of riflemen.

You may say that this is all in the books. Part of it is. But officers have learned from these books and have taught their men from them, and then have gone to maneuvers and taken up defensive positions that had no gap from end to end of the regimental front, that provided for not one bit of all-round defense, that made the defensive formation like a triangle, with the command post at the apex and all the troops strung along the side toward the enemy. A "center of resistance" must have a center; and to have a center, a circle must have a circumference. A straight line is the shortest distance between two points, a circle is the longest way from a single point back to itself again.

Possibly we are "fed up" on our own books, and perhaps a little scrutiny of unfamiliar print will drive home to us the principles and methods that all modern armies are writing into their regulations for modern warfare.

# Notes from the Chief of Infantry

## COMMISSIONED PERSONNEL, OFFICE OF THE CHIEF OF INFANTRY

CHIEF OF INFANTRY—Major General ROBERT H. ALLEN
EXECUTIVE—Colonel WILLEY HOWELL

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LIEUT. COL. L. D. GASSER.
MAJOR R. E. O'BRIEN.
MAJOR P. W. BAADE.
MAJOR P. D. PARKINSON

**Section II—Intelligence**

MAJOR T. B. CATRON.
MAJOR S. J. CHAMBERLIN.

**Section III—Training and Inspection**

LIEUT. COL. H. GLADE (attached).
MAJOR J. D. BURNETT.
MAJOR B. MAGRUDER.
MAJOR C. H. BONESTEEL.

**Section IV—Arms, Equipment and Finance**

LIEUT. COL. F. G. KELLOND.
MAJOR T. LAWRENCE.

**Section V—Mobilization and Organization**

MAJOR M. H. THOMLINSON.
MAJOR E. M. WILSON.

# The Shaker Aiming Device

THE United States Marine Corps has recently substituted a novel rifle rest for use in teaching sighting and aiming for the one described on page 10, T. R. 150-10. Captain Richard Shaker, Gendarmerie d'Haiti, Gunnery Sergeant, United States Marine Corps, designed the device, of which the Commandant of the Marine Corps has been kind enough to authorize publication of this description. The rifle rest, or "Shaker Device," mounts two rifles in notches cut near the ends of a clothing box. When the rifles are mounted so that the lines of sight will converge on a bull's-eye at 50 feet, the coach need not switch places with the pupil to verify the sighting of the piece.

The Shaker Device is simple in design, and company mechanics can build it from material available at any military station. The dimensions of the clothing box that is illustrated on this page are 11½″ deep by 17″ wide by 32″ long. The slots on the near side of the box, which hold the rear ends of the rifles, are 1¾″ wide by 2″ deep, the outside edges of the slots being 3″ from the ends of the box. The slots on the far side of the box, which hold the barrels, are 1¼″ wide

by 1" deep, and the outside slots are 3½" from the ends of the box. Stones or sand bags are put into the box to keep it stationary.

After the coach has mounted the two rifles securely in the notches he causes the lines of sight to intersect at the bull's-eye by adjusting windage and elevation on the sights. He then takes position at one of the rifles and puts the pupil at the other. The aiming exercises laid down in T. R. 150-5 can then go ahead without interruption.

The box may also be used for long distance triangles by adjusting the rear sides to conform to the new range. If the box is to be used at both long and short ranges it would sometimes be advisable to cut the notches so that the lines of sight would converge at an intermediate range, so that the rear sight adjustments would not be extreme for either range.

The Chief of Infantry has examined the Shaker Aiming Device with much interest and believes that its use in the Infantry will prove advantageous.

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# Foreign Service for Infantry Officers

ABOUT 259 Infantry officers will be sent on foreign service during the calendar year 1927. Any extensions of tours of officers now on foreign service, the number of which cannot be foreseen, will, of course, decrease the foreign service details correspondingly.

For future foreign duty the officers of each grade are placed in groups in accordance with the amount of past foreign service credit. Enlisted and commissioned foreign service in the Army, the Navy and the Marine Corps counts for this purpose. When it is necessary to send officers to foreign service they are selected from within these groups rather than in strict accordance with the length of foreign service credit. This allows latitude in preventing changes of station before completion of normal periods of duty.

The number of officers in each grade who will go to foreign service in 1928, with the approximate amount of foreign service credit, is:

| | No. | Amount of Foreign Service Credit |
|---|---|---|
| Colonels ..... | 4 | 6 to 7¼ years |
| Lieutenant Colonels | 3 | 2 to 4½ years |
| Majors ..... | 18 | 1 to 2 years |
| Captains ..... | 101 | ½ to 1½ years |
| 1st Lieutenants .... | 58 | ½ to 1½ years |
| 2nd Lieutenants ... | 75 | 0 to ½ years |

The records indicate that there are enough captains with less than 18 months service to fill all foreign service vacancies in that grade to include the year 1930.

# Antiaircraft Protection of Infantry

A FIRST solution to one of the most important problems of infantry, the protection of foot troops from air attack, is taking definite form.

Methods and means have been evolved during the year 1927 which permit our Infantry, with its present organization and existing weapons modified for the purpose, to reduce the seriousness of the threat of aircraft attack. The Matthews' carriage with the adapter for antiaircraft fire has been developed to the point where its use facilitates the employment of infantry's most effective weapon against aircraft, the machine gun. Notes on antiaircraft protection of infantry, although only in tentative form, have been drawn up and submitted to the War Department for approval. It is probable that these notes will reach the service during the calendar year 1928. The Infantry Board and Department of Experiment are completing a study to perfect courses of fire for training individuals armed with infantry weapons in fighting aircraft.

This first solution is based largely on the premise that it is impracticable for infantry to move from danger during the course of an aircraft attack and, consequently, that the most effective protection for infantry is the counter-offensive, bringing fire to bear on the aircraft with all weapons at hand.

Experiments conducted by the Department of Experiment to determine the effectiveness of infantry weapons against air targets indicate that aircraft may be denied altitudes less than 1,500 feet for attack on foot troops unless the air forces are willing to incur extensive losses. Using the war-strength platoon of rifles and automatic rifles and firing at a sleeve target twelve feet long and two and one-half feet wide towed by an airplane, the Department of Experiment concluded after 82 test flights that infantry rifle platoons are reasonably sure of obtaining hits at 750 feet or less every time the plane passes. While hits at elevations above 750 feet are less frequent, rifle fire will appreciably endanger planes flying at elevations up to 1,000 feet, where the average number of hits for each flight was found to be two. With platoons of .30-caliber machine guns 70 flights showed that machine gun platoons are reasonably sure of obtaining hits at elevations of 1,250 feet or less every time the plane passes. At elevations above 1,250 feet the hits will be fewer, but machine gun fire will appreciably endanger planes up to 1,500 feet, where the average number of hits for each flight was one and one-half. The tests were conducted with 1906 ammunition and with improvised antiaircraft equipment. With modern ammunition and the recently developed antiaircraft equipment, the effective range of rifle and machine gun fire against air attacks should be materially greater.

The solution of the important problem of defense against attack from the air can be only tentative, because the airplane is still in process of development. The study of antiaircraft protection of infantry is thus necessarily

continuous. Even in the preliminary solution, which is based on the present characteristics of airplanes, there are yet many problems to be solved. Among them are:

What changes in march formations will be necessary? If infantry, with the effective fire of its weapons, can make the price of attack by airplane too dear, extensive changes from the present march formations will not be necessary. If, on the other hand, the fire of infantry weapons is not sufficiently effective, or if the airplane can still attack effectively from altitudes beyond the range of infantry weapons, then more widely dispersed formations must be worked out.

Assuming that infantry offensive efforts will be successful in protecting individuals on the march, will similar methods be effective for protecting trains on the road? Men can move to the sides of the road and obtain partial cover in the period of time which will normally elapse between the warning and the attack. Vehicles, however, will not be able to take advantage of even this cover and will necessarily be caught on the road. Counter-offensive methods with weapons will form the only protection for vehicles.

What system of alarms will best warn infantry of an impending air attack? Aircraft attack with great speed; unless the alarms are promptly given, foot troops will not have time to take effective offensive measures.

These and other problems are under study. The solution to current problems, and the perfection of the present tentative solutions will come as a result of further experimentation and practice.

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# Machine Gun Ammunition to Be Loaded at Factories

THE War Department has recently approved the issue of machine gun ammunition, loaded in belts and packed in containers similar to those for caliber .30 ammunition. The belts will be loaded at the factories. They will carry 250 rounds and may be transferred to the machine gun boxes which are carried in the ammunition cart.

There has been continued demand for an expendable machine gun belt and machine gun ammunition container since the World War. A paper belt was developed, but it deteriorated so rapidly that it was entirely unsuited for service conditions. An expendible box was made and issued in 1919, but it was not strong enough to remain air and water tight under rough usage. Efforts to obtain a more serviceable box produced an article that was too expensive.

It has now been decided to make no more efforts to develop expendable belts and boxes. When the web belt is empty, it will be returned to the

supply department for reloading. The loading machine will still be part of the equipment of machine gun companies and they will use it in emergencies when the supply of loaded belts is impracticable or has failed, and for loading armor-piercing and tracer ammunition.

# Official Records of Qualification With Infantry Arms

The following reports on the regular season's practice with infantry arms have been received in the office of the Chief of Infantry:

RIFLE MARKSMANSHIP

| Inf. Regt. | No. of men on rolls of the Regt. | No. of who who completed the course | Percentage who completed the course based on the No. on the rolls | Number of men who qualified | | | | Average score per man | Percentage qualified based on the No. who completed the course |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Exp. | SS. | MM. | Tot. | | |
| 1st | 517 | 489 | 94.58 | 28 | 91 | 321 | 440 | 269.9 | 89.77 |
| 5th | 475 | 424 | 89.26 | 55 | 80 | 259 | 394 | 274.70 | 92.02 |
| 10th | 642 | 555 | 86.4 | 100 | 175 | 250 | 525 | 283.79 | 94.59 |
| 11th | 695 | 526 | 75.7 | 47 | 114 | 302 | 463 | 270.66 | 88.02 |
| 13th | 502 | 428 | 85.25 | 16 | 44 | 246 | 306 | 247.61 | 72.97 |
| 14th | 929 | 764 | 71.47 | 62 | 149 | 497 | 708 | 289.70 | 92.66 |
| 17th | 644 | 587 | 91.14 | 51 | 121 | 351 | 523 | 269.97 | 89.09 |
| 19th | 634 | 519 | 81.86 | 36 | 131 | 326 | 493 | 277.80 | 94.99 |
| 20th | 510 | 469 | 91.96 | 43 | 114 | 275 | 432 | 276.10 | 92.11 |
| 21st | 62 | 52 | 74.51 | 3 | 21 | 25 | 40 | 206.88 | 94.23 |
| 24th | 710 | 608 | 85.63 | 21 | 85 | 329 | 415 | 254.44 | 68.25 |
| 27th | 661 | 535 | 80.93 | 116 | 193 | 217 | 526 | 289.23 | 98.32 |
| 29th | 1715 | 1459 | 85.06 | 89 | 315 | 951 | 1355 | 274.05 | 92.93 |
| 31st | 837 | 645 | 17. | 92 | 204 | 326 | 622 | 281.90 | 96.43 |
| 33d | 830 | 669 | 80. | 48 | 146 | 400 | 594 | 272.08 | 88.78 |
| 34th | 339 | 252 | 74.33 | 15 | 58 | 155 | 228 | 272.96 | 90.71 |
| 35th | 628 | 502 | 80. | 24 | 120 | 308 | 452 | 271.60 | 90.04 |
| 45th | 841 | 841 | 100. | 95 | 245 | 430 | 770 | 257.7 | 85.36 |
| 57th | 902 | 819 | 90.12 | 133 | 285 | 389 | 807 | 286.06 | 98.53 |
| AUTOMATIC RIFLE MARKSMANSHIP | | | | | | | | | |
| 1st | 72 | 72 | 100 | 50 | 18 | 4 | 72 | 529.04 | 100. |
| 19th | 65 | 65 | 100 | 9 | 24 | 29 | 62 | 373.29 | 95.38 |
| 20th | 93 | 93 | 100 | 9 | 24 | 29 | 62 | 373.29 | 95.38 |
| 21st | 67 | 67 | 100 | 7 | 35 | 21 | 63 | 375.58 | 94.03 |
| 27th | 288 | 288 | 100 | 122 | 73 | 63 | 258 | 472.01 | 89.58 |
| 29th | 108 | 108 | 100 | 73 | 26 | 8 | 107 | 516.28 | 99. |
| 35th | 263 | 263 | 100 | 74 | 63 | 88 | 225 | 441.60 | 85.55 |
| 57th | 215 | 215 | 100 | 85 | 79 | 35 | 199 | 476.27 | 29.56 |
| PISTOL MARKSMANSHIP | | | | | | | | | |
| 10th | 400 | 262 | 65.5 | 40 | 45 | 102 | 197 | ..... | 70.23 |
| 11th | 362 | 194 | 52.20 | 10 | 13 | 114 | 137 | 63.63 | 70.62 |
| 14th | 394 | 321 | 87.47 | 28 | 60 | 124 | 212 | 63.68 | 66.04 |
| 19th | 381 | 212 | 55.64 | 11 | 25 | 75 | 111 | 59.71 | 52.36 |
| 21st | 394 | 239 | 60.65 | 32 | 46 | 120 | 198 | 70.19 | 82.85 |
| 24th | 118 | 113 | 95.76 | 10 | 11 | 62 | 83 | 63.01 | 73.42 |
| 27th | 392 | 212 | 54.00 | 10 | 29 | 116 | 155 | 64.50 | 73.11 |
| 29th | 645 | 492 | 76.29 | 25 | 51 | 235 | 311 | ..... | 63.21 |
| 33d | 442 | 385 | 87.1 | 27 | 40 | 150 | 217 | 61.07 | 56.36 |
| 35th | 404 | 248 | 61.38 | 24 | 41 | 123 | 197 | 68.25 | 79.44 |
| 45th | 196 | 176 | 90.0 | 7 | 18 | 84 | 109 | 62.67 | 62. |
| 57th | 215 | 191 | 89.0 | 15 | 23 | 94 | 132 | 65.95 | 69.11 |

## MACHINE-GUN MARKSMANSHIP

| Inf. Regt. | No. of men on rolls of the Regt. | No. of men who completed the course | Percentage who completed the course based on the No. on the rolls | Number of men who qualified: Exp. Gnrs. | 1CL Gnrs. | 2CL Gnrs. | Total | Average score per man | Percentage qualified based on the No. who completed the course |
|---|---|---|---|---|---|---|---|---|---|
| 1st | 153 | 138 | 90.91 | 5 | 24 | 109 | 138 | 308.70 | 100. |
| 5th | 136 | 122 | 89.7 | 2 | 7 | 93 | 102 | 259.80 | 83.60 |
| 10th | 183 | 154 | 84.1 | 15 | 44 | 95 | 154 | 319.73 | 100. |
| 11th | 167 | 142 | 85.04 | 1 | 16 | 116 | 133 | 290.62 | 93.66 |
| 13th | 182 | 149 | 81.20 | 1 | 8 | 115 | 124 | 261.00 | 80.53 |
| 14th | 227 | 142 | 62.55 | 4 | 28 | 109 | 141 | 302.82 | 99.29 |
| 15th | 73 | 57 | 76.70 | 10 | 15 | 31 | 56 | 320. | 98.24 |
| 17th | 150 | 132 | 88 | 7 | 32 | 93 | 132 | 307.05 | 100. |
| 19th | 186 | 138 | 74.19 | 13 | 40 | 85 | 138 | 315.23 | 100. |
| 20th | 165 | 143 | 86.54 | 7 | 31 | 101 | 139 | 301.70 | 97.62 |
| 21st | 183 | 154 | 84.15 | 19 | 30 | 103 | 152 | 309.58 | 98.70 |
| 24th | 121 | 116 | 95.86 | 5 | 19 | 90 | 114 | 302.06 | 98.31 |
| 27th | 186 | 138 | 74.19 | 13 | 44 | 79 | 136 | 315. | 98.55 |
| 29th | 334 | 247 | 71.85 | 8 | 42 | 196 | 246 | 299.68 | 99.59 |
| 31st | 206 | 161 | 78.15 | 10 | 60 | 89 | 159 | 317.47 | 98.75 |
| 33d | 271 | 205 | 75.64 | 4 | 41 | 156 | 201 | 299.17 | 98.05 |
| 35th | 176 | 156 | 88.63 | 3 | 28 | 124 | 155 | 300.45 | 99.36 |
| 45th | 216 | 205 | 94.9 | 2 | 46 | 56 | 204 | 302.63 | 99.5 |
| 57th | 221 | 217 | 98.2 | 45 | 92 | 80 | 217 | 336.01 | 100. |

## MARKSMANSHIP—37 MM GUN AND 3-INCH TRENCH MORTAR

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1st | 20 | 19 | 95 | 8 | 10 | ... | 18 | | 94.73 |
| 3d | 14 | 13 | 92.85 | 11 | 2 | ... | 13 | | 100. |
| 5th | 17 | 15 | 88.24 | 9 | 5 | 1 | 15 | | 100. |
| 10th | 19 | 16 | 84.2 | 4 | 6 | 6 | 16 | | 100. |
| 11th | 19 | 19 | 100. | 12 | 7 | ... | 19 | | 100. |
| 13th | 13 | 13 | 100. | 6 | 2 | 5 | 13 | | 100. |
| 14th | 12 | 12 | 100. | 2 | 5 | 5 | 12 | | 100. |
| 17th | 17 | 17 | 100. | 7 | 6 | 4 | 17 | | 100. |
| 19th | 19 | 18 | 94.73 | 5 | 6 | 6 | 17 | | 94.44 |
| 20th | 14 | 14 | 100. | 2 | 7 | 5 | 14 | | 100. |
| 21st | 18 | 18 | 100. | 15 | 3 | ... | 18 | | 100. |
| 27th | 16 | 16 | 100. | 16 | .. | ... | 16 | | 100. |
| 29th | 111 | 97 | 87.39 | 19 | 33 | 45 | 97 | | 100. |
| 31st | 9 | 9 | 100. | 5 | 4 | ... | 9 | | 100. |
| 33d | 17 | 15 | 88.2 | 6 | 7 | 2 | 15 | | 100. |
| 35th | 17 | 17 | 100. | 6 | 7 | 4 | 17 | | 100. |
| 45th | 19 | 19 | 100. | 2 | 13 | 4 | 19 | | 100. |
| 57th | 19 | 18 | 94.73 | 13 | 4 | 1 | 18 | | 100. |

## BAYONET QUALIFICATION

| Inf. Regt. | No. of men on rolls of the Regt | No. of men who completed the course | Percentage who completed the course based on the No. on the rolls | Number of men who qualified: Expert | Total | Average score per man | Percentage qualified based on the No. who completed the course |
|---|---|---|---|---|---|---|---|
| 1st | 432 | 375 | 89.10 | 243 | 243 | 58.55 | 64.77 |
| 11th | 586 | 390 | 66.53 | 150 | 150 | 70.49 | 38.46 |
| 14th | 767 | 523 | 68.20 | 399 | 399 | 79.32 | 76.29 |
| 19th | 573 | 450 | 78.53 | 280 | 280 | 69.27 | 62.22 |
| 21st | 582 | 438 | 75.25 | 330 | 330 | 86.07 | 75.34 |
| 23d | 460 | 343 | 74.57 | 258 | 258 | 86.87 | 75.21 |
| 27th | 601 | 496 | 82.52 | 377 | 377 | .... | 76.07 |
| 29th | 1007 | 719 | 71.04 | 164 | 164 | 70.80 | 22.80 |
| 31st | 652 | 438 | 67.2 | 246 | 246 | 82.11 | 56.16 |
| 33d | 689 | 570 | 82.7 | 458 | 458 | 85.57 | 80.35 |
| 35th | 673 | 579 | 86.03 | 512 | 512 | 82.64 | 88.43 |
| 45th | 703 | 629 | 89.5 | 444 | 444 | 84.0 | 71.0 |
| 57th | 707 | 593 | 83.87 | 433 | 433 | 89.11 | 73.02 |
| 65th | 176 | 156 | 65.90 | 116 | 116 | 74.63 | 74.36 |

# Infantry Association As Your Agent

THE Infantry Association is a very strong and loyal semi-official organ of the Infantry branch. It has on many occasions rendered valuable service to the Infantry and the Chief of Infantry. Its history can be expressed by the word *Service*. The Chief of Infantry believes in the adage "Serve those who Serve you," and also that each Infantryman should do all that he can in the support of the Infantry Association. Most Infantry officers are members of the Association, which is the first step toward supporting it. Many members, however, do not realize that they can make their support more active and at the same time derive material benefit for themselves. One way to do this is to make purchases from or through the Association.

The Association, through its Book Department, can supply merchandise in considerable variety. It specializes in books of all kinds and in any quantity, in engraving and printing (calling cards, Christmas cards, invitations, announcements, menus, books and pamphlets) and in periodical subscriptions. It carries such merchandise as bill folds, brief cases, officers' and enlisted men's caps, Doughboy mattresses, golf balls, handbags, insignia, leggings, locks (Sesamee Keyless), Kalamazoo loose-leaf binders, Alligator raincoats, sabers, Sam Browne belts, So-Handy personal files, spurs and other articles useful to the military man. The Association is also glad to act as purchasing agent for any article. Besides pricing its merchandise as low as the producers permit, the Association gives a five per cent discount to members for cash remittance or payment within 30 days on purchases of all articles that it offers at regular list prices. It also asks the opportunity to make bids on quantity orders as—for example, on the Pershing style cap for enlisted men.

Individual officers and organization commanders purchase many articles that the Infantry Association could furnish in like or better quality at the same or less cost. The Chief of Infantry is pleased to note that many Infantry officers patronize their Association. He hopes that more will take this way, not only to buy to good advantage, but also to give financial support to the Association. He is also always glad to learn that officers have been instrumental in keeping up or adding to the membership of the Association. He feels that the Infantry officers on duty with the National Guard and Organized Reserves can and should acquaint officers of these organizations of the Infantry Association and thereby obtain many new members. He feels that to the Infantryman, or to any soldier, the INFANTRY JOURNAL is worth many times its cost.

# Editorial Comment

## The Leonard Wood Memorial

MAJOR GEN. JAMES A. HARBORD, the national chairman for the Leonard Wood Memorial, has asked the INFANTRY JOURNAL to help in spreading the word about the project to perpetuate the memory of Leonard Wood and at the same time bring deliverance to some of the victims of that terrible disease, leprosy. Here is what the Leonard Wood Memorial has to say:

"A CRY THAT HAS ECHOED THROUGH THE AGES"

"The cry of the leper—outcast, unclean! A soul-racking, melancholy cry that has resounded in the halls of time since Egypt was young and the pyramids were but a dream.

"'*If Thou wilt Thou canst make us clean,*' pleaded the lepers when the Man of Galilee walked among them nearly 2,000 years ago. And in His great compassion He laid His hands upon them and gave them comfort.

"But even in this advanced age the agonized cry of the leper is raised, unheard, lost on the winds of the sea and stifled by the loneliness of far-off islands where millions of lepers this very hour are living a walking, breathing death. Actually, millions there are—men, women and helpless little children who never should feel the hand of leprosy. Thousands of these are under the American flag in the world's greatest leper colony at Culion in the Philippines.

"And yet, these exiled and forgotten millions are suffering and dying needlessly. It is astounding but true that leprosy is curable. In five years more than 1,000 of the milder cases have been cured at Culion and the patients returned to their homes. Now, only money is needed to provide increased personnel and equipment at Culion so that a perfected cure may be given to the lepers of the world. This was Leonard Wood's dream and it was he who asked the American people for help, just before his death.

"'*If Thou wilt Thou canst make us clean.*' Yes, the same old prayer, but this time it is addressed not to the Man of Galilee but to You. You can help rid the world of Leprosy—Stamp it Out for all time—by simply sending your check to aid the heroic men and women who have buried themselves among the lepers and are devoting their lives to this great task."

The INFANTRY JOURNAL joins with General Harbord and the other officers of the Leonard Wood Memorial in urging all members of the Association to write to General Harbord for interesting and more complete information about the Memorial and the campaign against leprosy, or, better still, to send a check to General Samuel McRoberts, the National Treasurer, the Leonard Wood Memorial, 1 Madison avenue, New York City, N. Y.

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## War-Time Rank

A MAJOR emergency would bring into active service large numbers of Reserve officers. Under present conditions many of them would be senior to and would perhaps command Regular officers who had been their instructors in things military. Some officers of the Regular Army have wondered what, if anything, would be done about this anomalous, and to them, at least uncomfortable situation.

Evidently some Reserve officers also have given thought to this situation. To judge from a short article in *The Reserve Officer,* the official organ

of the Reserve Officers' Association, this thought has been sympathetic and intelligent. So that the wholesome position of the Reserve Officers' Association may be known to the Regular Army, we give below in full what *The Reserve Officer* of October, 1927, had to say on the subject:

"The Reserve officers of the nation have for a long time been greatly embarrassed by the oft-repeated assertion by a few suspicious persons throughout the several services that the Reserve officers were seeking rapid promotion for the purpose of filling a great majority of the higher grades in time of another national emergency.

"The very suggestion of such a desire is slanderous in nature and would, if founded on fact, constitute an indictment of the loyal Americans who have made themselves available (in most cases, again) if their beloved country should need their services.

"The Reserve officers have again and again lauded and applauded the present policy of the War Department to send as many selected officers of the Army as possible to the various Army schools for advance education, fitting them for higher commands in time of a great national need. To assume a civilian officer seeks or would be willing to lead professional officers in the command of great masses of their brother citizens in war, is to assume he has lost all appreciation of the value of human blood. Were they indifferent to human life and happiness, they would be last to bare their breasts to protect either.

"Gentlemen of the War Department, seek, in fairness to the Reserve officers of this land, a plan of issuing emergency commissions to the Regular officers, or in some other manner fix their status in these days of peace, when every man's value and merits may be carefully considered and his greatest worth determined in time to make sure he will be given the most favorable opportunity in time of another war to be of the greatest service to the country to whose interests he is the most devoted of all.

"The Reserve officers seek no advantage nor favor; they are content to receive a fair opportunity to develop themselves for greater service, and are most happy to leave the means and methods to their fellow-officers of the Army."

## The Pension

IS the pension status of Regular Army personnel adequate? If not, what is to be done about it?

These are questions to which the Legislation Branch of the War Department is giving serious study.

In order to determine the answer to the first question Col. Fred R. Brown, Chief of the Legislation Branch, needs detailed and definite data. He would like to hear from anyone who has personal knowledge of cases of destitution among families of disabled soldiers of the Regular Army (except veterans of the World War who do not receive pensions but are provided for by the Veterans' Bureau) who have been discharged on surgeon's certificate for disability in line of duty, and who have not received an adequate pension from the Pension Bureau within two months after discharge.

Such report should give full details, including name, rank, organization, length of service, date and cause of discharge, date of application for pension, date first pension was received or reasons for non-receipt, and number of dependants and approximate ages of children. If the soldier was a veteran of any war or has received a Distinguished Service Medal or a Medal of Honor the report should so state. If possible, it should also tell of any financial or other aid received from friends or relief agencies, the extent to which the soldier is or was able to supplement his pension by a gainful occupation, any hospitalization that has been necessary since discharge, and any other information that bears directly on the subject of inadequacy

of Regular Army pension of enlisted men or the dependents of officers or enlisted men.

The answers to the following questions would also be useful: To what extent has the Soldiers' Home been utilized. If not at all, why not? If it has been used, how was the soldier's family provided for?

The Legislation Branch will hold all names in strict confidence. It will use the remainder of the information in connection with any legislation on the subject of pensions that may be introduced in Congress.

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## World War Experiences

A NUMBER of officers have suggested that the INFANTRY JOURNAL print World War experiences of individuals or organizations. The JOURNAL would be glad to do this very thing if the principals in such experiences would send in the stories.

As we understand the suggestion, and our own ideas run along the same line, the officers who made them had in mind narratives of interesting incidents, preferably ones that are pointed by special human interest or by tactical lessons. Articles such as these would be at least as instructive as, and much more interesting than, mere recitals of facts accompanied by detailed operations and other maps that are difficult to reproduce clearly, and perhaps even more difficult to follow.

There are many persons in the service who have in their memories or their records material for articles such as those that have been suggested. We should like to prevail on them to put this material into manuscript form for the benefit of the many readers of the INFANTRY JOURNAL who would be interested in the stories, and to their own financial advantage within the limits of the modest amounts that the JOURNAL can pay for articles.

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## Morale

NAPOLEON said that he would conquer Europe with little bits of ribbon. This was his way of saying that prompt and public recognition of duty well done is not only a *sine qua non* of, but also a most important factor in building and maintaining morale.

Morale in peace-time may or may not be receiving more attention than formerly. In any event, a new means for promoting it has come into use in our Army. A "bit of ribbon," in the form of the Soldier's Medal, is now being used in peace as well as war.

Eleven members of the Regular Army received the Soldier's Medal for meritorious services during 1926. These eleven soldiers (four officers and seven enlisted men) were decorated for saving lives and for devotion to duty at great personal risk.

Deeds such as those for which these men wear ribbons on their breasts were formerly recognized by special commendations in orders or by the Life Saving Medal awarded on recommendation to the Treasury Department. Now the Army can fittingly take care of its own. It has its own "bit of ribbon" to add to the forces that work for a condition that is important in peace as well as in war—high morale.

# Reviews and Discussion

## Loyalty an Involuntary Emotional Reaction

Tactus

WEBSTER defines loyalty as—"Fidelity to a superior, to duty. Loyalty, in modern usage, oftener connotes the feeling or sentiment (often strong or even enthusiastic) accompanying a sense of allegiance."

There is a big difference between being faithful to duty and having allegiance toward a senior.

A subordinate may have no confidence in his commander, may utterly despise him, and may yet be faithful to job and duty. Many a commanding officer mistakes a lack of tact for disloyalty.

Major Jones, in his article in the December number of the INFANTRY JOURNAL, speaks of "spontaneous and forced loyalty." Under the definition given by Webster, what is that forced type worth? Is it not consummate hypocrisy and suave tactfulness? What becomes of it when the subordinate is free of the force that impels it?

Can a man correctly say to himself—"I am going to have a feeling of loyalty for Major Brown because he is my battalion commander?" He cannot, any more than he can say—"I am going to have a feeling of tender love for Miss Brown because she is my sister's chum." He may cleverly simulate in each case and completely deceive both Major Brown and Miss Brown; but for him actually to have the feelings, they must come to him as reactions stimulated by Major and Miss Brown. Affection is the foundation of both love and loyalty, they are sister emotions that are engendered by proper stimuli. They are decidedly not voluntary actions. On the contrary, they are involuntary reactions over which we have no control. William James in his "Principles of Psychology," volume II, page 442, says: "Every object that excites an instinct excites an emotion as well. Emotions, however, fall short of instincts, in that the emotional reaction usually terminates in the subject's own body, whilst the instinctive reaction is apt to go farther and enter into practical relations with the exciting object. . . . Its (emotional) stimuli are more numerous, and its expressions are more internal and delicate, and often less practical."

I am not a psychologist—for me loyalty *is* an unfathomable condition of the inner mind. I don't know why some men inspire in me blind, unreasoning allegiance, while others generate a feeling of hostility, but I do know that it is something in them that causes my reactions.

# Rotation in Duty

Lieutenant Benjamin R. Farrar, Infantry

IF OUR country should become embroiled in another major war, most officers of the Regular Army who did not "go West" would be promoted. They would advance one or more grades with the war-time expansion of the Army, and, depending upon their merits or good fortune, would move still further later on.

In such an emergency many National Guard and Reserve officers would be placed on active duty and many new officers would come into the Army from civil life. Much of our work, especially at first, would be to instruct to the minutest detail these new men who would come under our commands.

What is so startling about this, one might ask? Any officer should be able to instruct the juniors in his own branch in their duties. Admitted—in peace, when we have time to study up on anything in which we find that we are deficient. But what of the hectic days of mobilization and war? Then we will have little enough time to learn our own new duties, to say nothing of perfecting ourselves in those of the grades that we have left. It would seem, therefore, that, in time of peace, we should take special care to learn all of the duties that pertain to the several grades as we hold them.

But don't we do that very thing? Some of us do, and a lot, I am afraid, do not. How many captains, for instance, are thoroughly familiar with the duties of an adjutant, a supply officer, a regimental plans and training officer, a regimental intelligence officer, a regimental communication officer, and the commanding officer of a headquarters company, a service company, a machine gun company, and a rifle company? How many lieutenants know all about the work of an assistant personnel adjutant, an assistant supply officer, a battalion adjutant, a battalion communications officer, the leader of a howitzer, a machine gun, and a rifle platoon? Besides all of this, how many captains and lieutenants could perform or instruct in the duties of a range officer, a post exchange officer, and a recreation and athletic officer?

Suppose, on the other hand, that from the beginning of his service in his grade, each captain or lieutenant spent six months in the performance of each of the duties listed above that are appropriate to his grade. Then, with very little brushing up, he could perform, teach and supervise others in performing these duties. His knowledge, being the result of experience, would be practical, besides which he would have the theoretical information that we get in the garrison schools.

Is such a plan of rotation in offices feasible? In my opinion it is. There would be difficulties, of course, but none that would be insurmountable.

Would the advantages outweigh the disadvantages? Chief among the disadvantages would be a loss of efficiency in and within the regiments. After a change of duties the office concerned would probably suffer for a while. On the other hand, as the experience of the officers became broader, this effect would become less and less noticeable.

Many of the advantages we already know. When we add to them that rotation in office would help the individual officer by broadening his experience, would take him out of the rut, would emancipate him from the constant repetition of routine that kills interest, it would seem that the advantages have much the better of the argument.

As against temporary loss of efficiency in the unit, we may set just one thing that should more than compensate, and that is the idea of "the greater good." For a temporary loss of efficiency in time of peace we would substitute the greater good of more wide-spread knowledge and of a measurably increased fitness to meet the problems that would arise if we should be called upon to accomplish our very *raison d'être* as officers—the Defense of our Country.

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# Impressions

First Lieutenant John Weckerling, 22d Infantry

TWO young officers of Infantry were whiling away a rainy afternoon at the bachelor quarters. Smith, the younger, a member of the previous year's class of Military Academy, was inclined to be moody and reminiscent.

"You know," he began, "I rather had a different idea of peace-time Army life than this has turned out to be. I remember the two months before graduation. I tried to visualize and to picture in my mind what kind of figure I should cut when I got to my first station."

His companion, Jones, a first lieutenant, interrupted:

"I know, old chap, you had seen 'Arizona,' with Douglas Fairbanks as the young second lieutenant, juggling rifles of goggle-eyed and admiring sentries, playing practical jokes on his seniors, falling in love with the prettiest girl near the post, and generally disporting himself."

"Yes," went on Smith, "I did have some sort of hazy idea like that, but of course never have consciously patterned my future on anything in that picture. I could see myself reporting to my colonel for duty. I hazily thought of blue uniforms and gold lace, the colonel seated back of a mahogany desk in his office, the walls of which were lined with pictures of former regimental commanders. I could see the adjutant, resplendent with saber, making a sort of ceremony of my presentation to the 'Old Man.'

"And how different it turned out to be! As a matter of fact, I reported after graduation to my regiment at Camp Blank. The outfit was just preparing to move back to the permanent post. The hour was late afternoon, the day hot and sultry, and I, of course, was dressed in my best, and heaviest. The adjutant was still on duty and welcomed me very cordially. Then he presented me to the C. O. by merely saying, 'Sir, Mr. Smith is reporting for duty.' The colonel was also cordial. Nothing wrong in that way, Jones; but the war-time buildings, the temporary camp, the short

but efficient and cordial greeting, so unlike my vision, that I became somewhat disillusioned. Where was my vision of gold lace and old Army tradition?

"I soon consoled myself, however, and enjoyed the march back to the post. After all, I reflected, this was field soldiering and would be time enough later on for the beautiful hops, dances, dinners and post life. I pictured myself as being accepted as a snappy young officer who knew his drills and routine from four years of intimate association with these things. Well, on the first day the major of the battalion assigned me as recruit instructor with a handful of the most awkward to push around"——

"What did you expect, old man, command of the division right off the bat?" asked Jones.

"I did expect to have a platoon at least, but it seems that most of the company was on special duty. In fact, we had about three squads for duty. The men were in khaki, those ill-fitting, faded-out things that can hardly be called uniforms. In platoon front I tried to get the men to keep something that approximated my idea of a good line, and ofttimes got really peeved at their efforts. I realize now that they drilled well, but those uniforms made it all look pretty ragged. At times, too, I had charge of fatigue details on general fatigue in the afternoons.

"The post life was disappointing, too. No one seemed to know that the bachelor existed socially except when some lady of the post had an unmarried visitor. The hops were where the last remnants of my illusions went overboard. Most of the officers were married and, with the few girls who lived on the post, they were numerically paired off, counting in the small group of bachelors. This had a depressing effect on general dancing and cutting-in, and the affairs became boresome.

"Of course, I am a bachelor, but I know classmates who married at graduation and who brought brides to small two-room apartments (call them apartments if you want) and to made-in-wartime shacks at large camps. Some are at places where they are trying to live on the $40 commutation of quarters. Anyway, I hope I can hold out against marriage until I pass the first pay period. I owe only a couple of hundred dollars for boots and a uniform."

At this point, Lieutenant Colonel Brown, who, unseen by the two younger officers, had been quietly listening to the talk, interrupted young Smith:

"Your experiences are perhaps the normal ones of newly commissioned officers. These young men picture Army life as one of gold lace and ceremonies, and a lot of other people also still think that of it. Before the war perhaps we did lay more stress on that sort of thing. Officers did not make the civilian contacts that they do today. It is therefore natural that the customs of the past are to be somewhat disturbed. We no longer have the blue uniforms; in fact, we have none for dress except the white uniform and the mess jacket in the tropics. The old Army was efficient and accomplished its mission. The new Army is also efficient, even if we lack some of the colorful details of the years before the war. And your statement about brides being brought

to stations and getting two rooms in a converted barracks building—well, I could tell you worse things than that about the time of my entry into the service, and of course others of the time before me could go me several notches. These things are relative. I still remember being decidedly perplexed as to how I was to pay the $500 that my first 'blues' cost. You will gradually adjust yourself to reality, though we may all sigh for some things that seem to be slighted."

"Anyway, the impression that the ordinary routine of the Army in these piping times of peace is glamourous seems to have taken root in the minds of most of the men in my class," spoke up Smith. "However false the impression, it is there and most of the recent graduates are distinctly disappointed in the service, and this results in the loss by resignation of many promising young officers in the first year of their commissioned service."

"Well," said Colonel Brown, "there are those who sigh for the return of the 'old days' which others assert 'never were, are or will be again.' Having lived in both periods, I favor the present Army, even though such things as the lack of blue uniforms, living in wartime shacks, slow promotion, meager pay for junior officers, and so on are with us. Better things make up for what we have lost; and the Army has, with the present policy, an unequalled opportunity to make good with the nation."

"What Colonel Brown says appeals to me," said Smith. "I believe I have acquired an appreciation of the Army's present aims and I feel sure that we are now much better off professionally. As a remedy, or as a dash of cold water, if I may call it that, I would suggest (and this is in no sense a criticism) that the 'Army Blue tradition' be less emphasized. I remember well an old picture of an officer dressed in blue and lounging in the deep comfort of a large chair, smoking a pipe, the smoke of which curled upward in sections, each of which pictured one of the officer's thoughts—a beautiful dress parade—a hop, with gold and lace on all sides—and other scenes of that kind. The present-day pictures suggest less ease in life, perhaps, but much more efficiency and satisfaction in being ready for whatever may come."

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# Glittering Brass and Tinsel

First Lieutenant Philip C. Pack, Infantry Reserve

THE uniform of the Army of the United States, after having undergone a number of radical changes in the past few years, is now apparently stabilized in general design. This does not mean, however, that all officers are thoroughly content with it.

To many, it is unnecessarily glittering and too resplendent with ornamentation. When a friend of mine first appeared in his new uniform a year or more ago, his wife remarked, "Well, you certainly look like a Christmas tree now." This is, possi-

bly, a typical reaction of the person outside the service.

The service coat has ten brass buttons, four shiny lapel insignia, two shiny rank insignia and often two regimental coats-of-arms. I am sure that many hundreds of officers will agree with me when I say that the glitter is very much overdone.

Negative criticism is worse than nothing, but constructive criticism, even though not heeded or considered, may bring new angles of thought to any problem. Were I asked, therefore, what changes I should recommend, I believe I could advance some sound suggestions. In the first place, I contend that the U. S. on the lapels is unnecessary. The cap, with its insignia, quickly identifies the wearer as an officer of the Army of the United States. The campaign hat does not need a gold hat-cord. And so we could do away with some of the glitter. I should substitute for the present rank insignia stripes of plain black braid on the sleeves, to correspond in design with those of the Navy. Aside from doing away with two more glittering objects, this would make recognition of rank from a distance much easier; it would do away with objects that continually tear the linings of overcoats; and it would not crowd the shoulder straps quite so much when equipped with regimental crests. I should also remove the metal branch insignia from the lapels and substitute for them embroidered insignia to be worn immediately above the sleeve stripes, as in the Navy.

This would mean lapels freed from too much ornamentation and would make the transformation from the peace-time to the war-time uniform merely a matter of substituting dark for bright buttons. It would enable officers and men of the Army and Navy to recognize each other's rank at a glance (I have served in both branches and know how little the enlisted men of one service know of the other). It would remove all excess appendages and give the wearer the feeling that his uniform, while neat and attractive, was not too gaudy.

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# Optimistic

## A Lieutenant

I KNOW that I shall be a lieutenant for twenty years. But then if I were promoted tomorrow I should lose a great deal. I should lose my inexperience and low rank as an excuse for my many faults. I should lose that opportunity for varied work with the men which is slowly but surely training me for higher command. I should lose that touch with the base of the pyramid which is so essential to a solid and safe foundation. You cannot get experience by reading about it. I would rather have my twenty years as a lieutenant, with its opportunity to observe and learn from the faults and good examples of my superiors, than to get fast promotion with lack of experience and, therefore, lack of ability.

I like my work and enjoy the outlook of being able to study it from a correct position. But if I should have to retire as a captain or a major, I might be tempted to start a war. To offset the chance of Army officers,

say twenty years from now, banding together and looking for some one to fight so that they might retire as colonels or generals, it might be a good idea to pass a law preventing any officer who has served thirty years as an officer from being retired with less rank than that of colonel. Would not this raise the morale of all of us low-ranking lieutenants?

## Criticizes Policy of "The Spark"

***One Reader Thinks Too Much Space Devoted to Telling People How to Live***

THE *Exchange Spark* is now in its sixth volume. That is, it has passed its sixth birthday of continuous publication, during all of which time it has come in for about the usual amount of praise and criticism generally expected by a publication of its kind.

It remained for one reader of the *"Spark,"* however, to write us a letter denouncing our department of uplift, which we have always endeavored to keep down to the minimum; and, inasmuch as the letter of criticism was signed, although illegibly, we feel in duty bound to reprint it in part:

"To the Editor:

"You seem to take a good deal of delight to telling other people how to live, and perhaps that is your business; but it seems to me that you exceed your duty, when you arrogate the right to reform all of those who may happen to enjoy an occasional drink of 'Scotch.'

"Last Christmas I was presented with a fine bottle of Scotch whisky which I have kept untouched until now as I sit at my typewriter to indite this letter to you. It bears the label Sandy MacDonald; a good, fair, well bodied liquor which I am assured was bought before the war.

"I have just now tasted of this bottle of liquor, I will confide to you; and I can not see where or how I am invading the rights of any other person on earth. I find it excellent. It warms my stomach; it inspires my thought. I can not feel, Mr. Editor, that I have wronged the community or added to the lawlessness of general society in doing so. It makes me tired to be classed as a criminal for any such reason.

"Just to show my independence of any such truck as you are writing I have just taken another drink of the aforesaid most jubilant Sandy MacDonald and I will say to you that it is just about as smooth a drink as a man ever put into his system. The second drink, I have now followed by a third.

"Now, Mr. Editor, I am no bum, and you can't make me out a bum. I like a little drink now and then and have just taken a third or maybe it was the fourth and I am more than ever convinced that eny man who doesn't id a big idiott. You say that this evabion of law is produc6ing a stahe of afairs in our Grear and Glourious Country. You are wrongh. This ciuntry is jess and good as it ever.

"I wan8t to shay to you that this socith is all righl. A lot of it woud8t do us harm. Wehn we ened stimulany we need it. My grandfafer was brought up onrum. They had it in the housd al teh time. They draaj it freeley and even the ministre drink it

when he camme to our houje. It8s a prettie kind of ciuntry when a grafdson is better than his grunfaher. I can drink this kinj thes kind of Scuthc all day and not be no worse cirizen than I was befote. I could drink this whole wuget and beger duiber en etelash.

"I wan8t to say to tou that there are 34"—to the laar cendus free american citisens in thi Ud. D.S. There are no umbs. I say to you that yoe maje me sink.

"Well, sir, me Editor, wheb I statartef out to write this lerret., i had no 383433 3 notion to taje mieg of ypor ti,me. But I jest hd to expresz mkselp to yu.

"These typewruter keys are buxxing aroubd so I canj wtite no more. But wheb I wheat of yiu id ti remud yio oner again and aguain thqut you arw dead wrong ib consfenging avert bany whu mau tak4 a drinkr oR not as fNE½abo7y ill. Bue wE aing't no bumBS.

"I1 will, sat inxlosing thaqt I wisg yiu a 2reght Chaigywax" an ½hayey Now frare."

"Rexcevtillu Yioytdx,

"CSBd&t trwu—½"

*—The Exchange Spark.*

# Corrections

THE Secretary of the Army Mutual Aid Association has invited attention to a statement in Captain Round's article, "Set Thy House in Order," which he thought might convey a wrong impression. His letter reads in part:

"I wish to invite your attention to a slight discrepancy. In paragraph 12, page 578, of your issue of December, 1927, under the caption 'Set Thy House in Order,' by Captain William A. Rounds, the detailed statement is not exactly correct, but the statement made in the text of the article, toward the end of the final paragraph of page 587 and following page, is correct.

"The Army Mutual Aid Association does automatically pay insurance benefits when due instantly by telegraph upon receipt from the Adjutant General of the Army of notice of the death of an officer who is a member of the Association. The widow and dependents are fully advised and furnished forms for establishment of Government claims prepared and ready for signature, which, when returned to the office of the Association, are filed and followed through the proper bureaus. The Association maintains a pension agent, regularly appointed by due process of law, and also maintains liaison with the Veterans' Bureau.

"Please do not consider this letter a criticism of Captain Rounds' article, which we have just read in its entirety and which we consider most wholesome and timely advice for Army officers."

In Captain F. E. Ambrose's article, "Targeting the Machine Gun," there are also two small errors. The plates are incorrectly designated; the one designated figure 1 should be figure 2, and the one designated figure 2 should be figure 1. Also in the last paragraph, on page 590, the fourth line should begin with the words "and set it."

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Referring to the article, "R. O. T. C. and C. M. T. C. at the National Matches," in the November number of the INFANTRY JOURNAL, a correspondent calls attention to the fact that Mr. Harry N. Renshaw of the University of Arizona is credited with having won the President's Match at Camp Perry in 1925 and again in 1927. This was a misstatement. Mr. Renshaw did not win this match in either year, though he did win the Scabbard and Blade Trophy in both years and the Chemical Warfare Trophy in 1925.

# The Regular Army Infantry

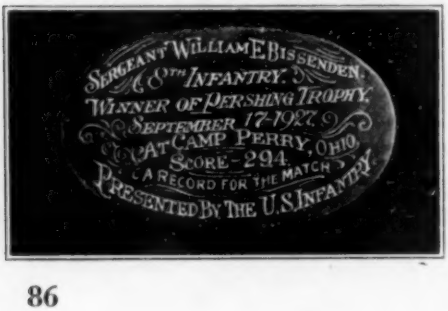
## Do We Do Enough of This?

A Colonel of Infantry

ON September 17, 1927, the Infantry rifle team in the National Team Match went to the 1000-yard stage 12 points behind the leading service team. The Infantry team, shooting better at 1000 yards than it had ever shot before, made up the 12 points and won a gruelling match.

Sergeant William E. Bissenden, 8th Infantry, made a score of 100 at 1000 yards and a total score of 294 for the match—the highest score ever made.

When Sergeant Bissenden rose from the firing point, after making his twentieth consecutive bull's-eye, Major Harry Hawley, an Infantry team shot of 1906-7-8 and 9, suggested that the Infantry range officers purchase the rifle with which Sergeant Bissenden shot and present it to him. This suggestion was immediately followed by the suggestion that this rifle be presented to Sergeant Bissenden by the United States Infantry, rather than by a small group of officers. The second suggestion very promptly received the sanction of Major General Allen, who was present at the team matches.




This famous rifle, Number 1272120, was purchased from the Ordnance Department and sent to the Remington Arms Company at Ilion, N. Y., where the stock was beautified and a silver plate inserted in the cheek of the stock with the inscription:

Sergeant William E. Bissenden
8th Infantry
Winner of Pershing Trophy
September 17, 1927
At Camp Perry, Ohio
Score 294
A Record for the Match
Presented by the U. S. Infantry

This rifle was forwarded to the Commanding Officer, Fort Moultrie, S. C., to be presented to Sergeant Bissenden by the Commanding Officer. It was accompanied by a letter from the Chief of Infantry.

The cost of this gift to the Infantry was as follows:

| | |
|---|---|
| Cost of rifle | $33.86 |
| Work on rifle (Remington Co.) | 33.00 |
| Express, Camp Perry to Ilion | 1.03 |
| Express, Ilion to Camp Meade | .81 |
| Express, Camp Meade to Fort Moultrie | .95 |
| Total | $69.65 |

Colonel O. S. Eskridge, Commandant of the Tank School, who was Director of Operations of National Matches in 1927, has been designated to collect from the Infantry for this rifle. Letters will be written to regi-

mental commanders, requesting donations which will amount to something less than $2 per regiment to defray the cost of this rifle.

It is believed that the Infantry should do more to show its appreciation of its good men than has been done in the past. Sergeant Bissenden shot in the President's Match and in the Individual Match and stood well up in both of these matches. The best effort of his career as a rifle shot was given to the Infantry Team in the team match, where it was needed more than in any other place in the entire matches. If Sergeant Bissenden had dropped one (1) point at 1000 yards, the team match would have gone to another team.

It is suggested that in the future in team matches the Infantry Team man making the high score in the team match be presented with the rifle with which he shot as a trophy and as an appreciation from the Infantry arm of the service.

# Here and There With the Infantry

Colonel G. H. Estes, commanding the 65th Infantry, writes the Chief of Infantry of the tactical instruction in his regiment in the following words:

In our classes in combat principles for the officers the following procedure has been adopted:

1. Conferences in the subject.
2. A map problem.
3. A map maneuver.
4. A tactical walk.
5. A terrain exercise, with staffs, communications and command personnel represented.

All of this is based upon the same situation and terrain, the terrain being Camp Buchanan, our maneuver area, seven miles from the post. The benefits from this system are far reaching. It was tried last year and was a great factor in contributing to the success of our field training this year. The officers know the terrain and can visualize it in the map problems and maneuvers. Then through four different phases of the same situation the principles are driven home.

Our gallery range opened on November 1. The range is open in the afternoons for all of the enlisted personnel, except those of the machine gun companies. Rifles, ammunition and targets are kept at the range, and a competent coach is on duty. All a man who desires to fire has to do is to obtain from the coach a rifle and ammunition and proceed to fire in the position prescribed for that week. He signs for the ammunition, and it is charged to his company's allowance. A cash prize of one dollar is awarded to the man making the best shot groups during the week. This system relieves the men from obtaining a rifle, ammunition, targets and cleaning materials from his company, and carrying them to the range and back again. It encourages shooting.

In another letter Colonel Estes says:

Each year the companies of the 65th Infantry compete for the Jarvis Efficiency Cup, which is awarded to the company most proficient from an administrative standpoint. As a result of this competition and the inspection that determines the winner, all records and equipment are in excellent shape for the annual visit of the inspector. An inspection has just been completed for the period ending October 31, 1927. There is only a difference of approximately eight points between the highest and lowest companies. Company B has a perfect score on courts-martial, not having had a single trial during the year. . . .

Company D is in first place. This is the first time in four years that a company in San Juan has won the competition.

* * *

Colonel Harry A. Eaton commands the 57th Infantry. The following extract from a letter that he wrote to the Chief of Infantry not long ago is of interest:

From observation I find that an officer who has never been in the Philippines before finds himself at a disadvantage in handling native troops. Other things being equal, it is desirable to assign for duty here field officers who have served here

2d Squad, Company I, 6th Infantry

*Chief of Infantry's Combat Squad, 1926 and 1927*

either as company officers or field officers before. Believe this outweighs any advantage that might be gained by endeavoring to give officers more variety in foreign service.

Believe it more necessary to assign here graduates of the Infantry School than is probably the case in Hawaii or Panama. Graduates taken together with officers of Philippine Scouts, who have not had advantage of schools, help to maintain a better average or balance.

* * *

THE OFFICE of Director of the Infantry Board is an important one. The man who holds it has a far-reaching influence on the Infantry. It is therefore important that he be chosen from among the best men in the Infantry. The new incumbent, Col. Charles D. Roberts, is such a man.

* * *

THE COMPANY OFFICERS' class at the Infantry School completed record practice with the automatic rifle with an average score of 561.99, which is the highest average yet recorded for any class at the school. Of the 118 officers who fired all qualified, with 105 as experts, 11 as sharpshooters and two as marksmen.

The Commandant issued a memorandum congratulating the class upon the achievement.

The class averages for the past three years follow:

1925-1926.....517.04
1926-1927.....550.16
1927-1928.....561.99

The high individual averages for the same period were:

1925-1926—Capt. Wendell L. Clemenson—654.

1926-1927—Capt. Donald B. Hilton and Capt. Archibald R. MacKechnie—660.

1927-1928—1st Lieutenant Augustus D. Saunders—661.

Capt. Alan W. Jones had charge of the instruction of class and of the firing.

* * *

THE INFANTRY SCHOOL RIDERS carried off their share of honors at the Chattanooga-6th Cavalry Horse Show, held at Chattanooga from November 11-13.

The Infantry School polo team met the 6th Cavalry team twice, both games going to the Cavalry team by scores of nine to seven and ten to eight. The second game was hotly contested. The score stood at a tie at the beginning of the eighth chukker, six to six.

The contestants from Fort Benning were unable to place in the saddle classes due to blemishes on the horses. However, of two polo classes and five jumping events, they annexed five firsts, four seconds and six thirds.

The Infantry School polo team consisted of: Major C. B. Lyman, Inf., No. 1; Lieut. H. J. Guernsey, 83d F. A., No. 2; Capt. W. A. Burress, 29th Inf., No. 3; Major H. J. M. Smith, Cav., No. 4; with Captains R. A. McClure and J. D. Forsythe as substitutes.

The riders who won ribbons in the horse show were: Major C. B. Lyman, two firsts, one second and three thirds; Capt. R. A. McClure, two firsts; Capt. W. A. Burress, one second; Lieut. H. J. Guernsey, one third; Mrs. R. A. McClure, one third; Mrs. R. H. Bishop, one first and one third, and Mrs. J. D. Forsythe, two seconds.

* * *

THE INFANTRY SCHOOL HUNT members were rewarded with the biggest catch since the club was organized in 1923 at one of the recent hunts. The prize was the largest wild cat killed in this section of the country.

Starting at five in the morning, the hunters followed the hounds for a few miles, when the leader of the pack, "Ole Pete," gave voice. After a lively chase the cat was captured on the bank of Harp's Pond. The cat weighed 38 pounds and measured 54 inches from tip to tip.

The Infantry School Hunt is sponsored by the Officers' Club. Captain Daniel H. Mallan, Veterinary Corps, is hunt director.

* * *

"ROLL OVER, DOUGHBOY" used to be the taunt of the Infantryman, resting after a day's march, to the mounted soldier on his way to "stables." In this day, with so many animals in an Infantry regiment, "Roll Over, Doughboy" has lost much of its point. The Doughboy is getting a much closer touch, and perhaps seat, with horses than he used to have. The program of the Fort Snelling Officers' Club horse show and accounts of polo there would indicate that the 3d Infantry has acquired the true touch in things equestrian.

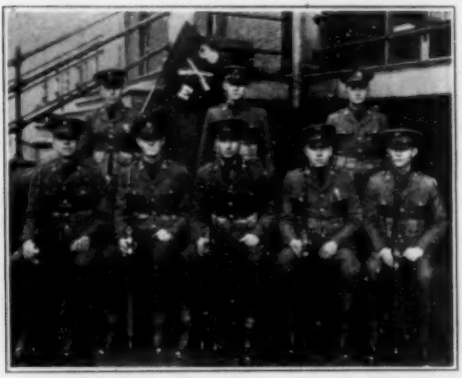
* * *

**Soccer Action**

*In the 22d Infantry at Fort McPherson*

A MAN WHO does the little things well has at least a good start toward accomplishment of the big ones. The men of the 11th Infantry, Col. George D. Freeman commanding, who are taking part in the regimental series of small-bore rifle competitions, are shooting for a cup. But whether or not they know it, the practice that they are getting and the proficiency that they are attaining with the small cartridge will be reflected in their accomplishments with service ammunition next year.

* * *



**Chief of Infantry's Combat Squad**
*From Company E, 38th Infantry*

IT IS an American tradition to eat well on Thanksgiving Day, to eat to the elastic limit, to eat until coats must be unbuttoned or burst asunder. Judging from the Thanksgiving menu of the Headquarters Company, 13th Infantry, which Colonel Naylor says is typical of the whole regiment, the 13th Infantry is doing its utmost to preserve the good old Thanksgiving tradition.

Whether or not the following paragraph from Colonel Naylor's letter has anything to do with the excellence of the dinners, what he says is of interest:

"It may also be of interest to know that the 13th Infantry in Boston Harbor is carrying out the recent policy inaugurated by the office of the Quartermaster General in regard to purchasing all supplies through the subsistence branch of the post quartermaster. The system at the Infantry Post is working like a charm. In some individual cases we do not get better prices, but in every case we get better goods."

* * *

NO WHIT BEHIND in imagination and ability to provide feasts are the cooks of the 22d Infantry. The Thanksgiving dinner menu of the Headquarters Company of that regiment which Col. George F. Baltzell sent in is fully calculated to tickle the palate and bring on somnolence.

* * *

THE TEMPLE OF HEAVEN, the Forbidden City, Confucius Temple—these are but three of the many sights in Peking. To see them all, the members of the 15th Infantry need spend only $15 "mex." Colonel Isaac Newell, their commanding officer, has made special arrangements for members of the regiment to make a three-day trip from their home station at Tientsin to Peking, see the sights, and return, all for about $6.50 gold.

* * *

TO BRING CHEER to the bedridden is to perform an act of charity. The Communications Platoon, 17th Infantry, 1st Lieutenant Du Pree commanding, did such an act this fall. Wesley Laugel, captain of the Omaha Central High School football team, had broken his neck in the early part of the season and was in the hospital when his team played for the championship of Omaha. To enable Laugel to get a play-by-play account, the Herald newspaper requested the cooperation of the Army. Lieutenant Du Pree, with four men of his platoon, set up a field telephone line from the football field to the sickroom, a distance of 13 city blocks. Laugel got the story of the game as it was being played and, although his team was defeated, he couldn't thank Lieutenant Du Pree enough.

**100 Per Cent!**

*Capt. L. A. Bessette and his men set 100 per cent as their mark. They overcame unusual difficulties and reached it*

ONE HUNDRED PER CENT. is the mark for perfect performance. Headquarters Company, 17th Infantry, qualified 100 per cent. with the rifle this year. This accomplishment was the more gratifying because it represents a very marked improvement over the record of last year. The comparative records are:

| | 1926 | 1927 |
|---|---|---|
| Company percentage..... | 82.6 | 100 |
| Number of experts..... | none | 10 |
| Number of sharpshooters.... | 4 | 18 |
| Number of marksmen..... | 30 | 18 |
| Number of unqualified..... | 12 | none |

The untiring efforts of Lieutenants Henry Du Pree and Fay Smith were of great assistance to Captain David A. Palmer in his work.

**Calisthenics on the Beach**

*15th Infantry Summer Training Camp, Chingwantao, China*

THE 38TH INFANTRY is starting on its regular small-bore work during the winter months and would be glad to shoot in competition against any of the rifle teams of the Army of the United States.

* * *

FROM *El Morro News* we learn that "the special customs of the 65th Infantry have been developed, in the words of Col. G. H. Estes, the regimental commander, 'with the sole purpose of increasing the morale and esprit de corps of the organization and the happiness, contentment and pride of the individuals who compose it'." The *News* then goes on to summarize the customs. The headings of this summary are: Officers, addressing; Officers, calling; Officers, death in family; Officers, joining regiment; Officers, leaving the regiment; Officers, New Year's Day; Officers, social events; Enlisted men, baptisms and christenings; Enlisted men, death of; Enlisted men, most distinguished soldier; Enlisted men, most conspicuous act of bravery; Enlisted men, retirement; Enlisted men, sick in hospital; Christmas Day; Memorial Day; Organization Day; Pay Day; Regimental march; Regimental paper; Regimental paper; Regimental scrapbook; Regimental seal; Regimental tabards and trumpets.

## Where the Regular Army Officer Comes From

THE following statement shows the sources of appointment of the 11,913 Regular Army and Philippine Scouts officers in service on June 30, 1927:

| Status at date of appointment | No. in service June 30, 1927 |
|---|---|
| Civil life (with or without former service) | 3525 |
| Graduate of United States Military Academy | 3394 |
| Enlisted man, Regular Army | 1166 |
| Officer, National Army | 266 |
| Enlisted man, National Army | 277 |
| Officer, Reserve Corps | 2030 |
| Enlisted man, Reserve Corps | 212 |
| Officer, National Guard | 336 |
| Enlisted man, National Guard | 275 |
| Volunteer officer | 43 |
| Volunteer enlisted man | 17 |
| Warrant officer, pay clerk, Army field clerk or field clerk, Quartermaster Corps | 52 |
| Contract surgeon or veterinarian | 144 |
| Medical Reserve Corps | 100 |
| Retired officer restored to active list | 17 |
| Retired enlisted man | 3 |
| Public Health Service | 3 |
| Revenue Cutter Service | 1 |
| Coast and Geodetic Survey | 2 |
| Flying cadet | 32 |
| Officer, Philippine Scouts | 18 |
| Total | 11,913 |

# The National Guard

## Militia Bureau Develops New Machine Gun Cart

THE October number of the INFANTRY JOURNAL contained an article describing the efforts of the Militia Bureau to develop a light machine gun cart suitable for manual or animal draft to replace the present heavy type. The article reviewed the development and the tests of such a cart for armory and field training.

Tests have been in progress since December, 1926. The cart has been thoroughly tested in both armory and field training periods. The following information was taken from the report of the Militia Bureau representative who has had the development in charge since its beginning. It is suggested that the reader refresh his memory from the previous article, as the information given here follows the sequence of the test items that it described.

Actual use of the eight experimental carts during the winter and summer of 1927, and a study of available training schedules in the Militia Bureau, have shown that the training load to be carried on the light cart should be confined to the following articles:

1 Machine gun and cover.
5 Ammunition boxes.
1 Extra barrel in cover.
1 Steam condensing device.
1 Gun record.
1 Tripod.
1 Water box.
1 Cart paulin.
1 Pair asbestos mittens,
2 Short ropes for braking on grades.
2 Pull ropes of the breast-strap type issued howitzer units. These are for the use of two additional men in pulling the cart over bad roads, across country and on grades.
1 Spare parts box. Existing tables of equipment for the National Guard authorize one box for each two squads.
3 Carrying slings. Optional equipment.

In addition to the above, equipment such as a belt filling machine, may be lashed to the carts when desired.

This light load will require little or no change in the existing drill for the machine gun units; at the same time, it includes sufficient equipment to permit the elimination of the ammunition cart for peace-time training. Without water in the gun or water box or ammunition in the belts, it will weigh about 160 pounds, while with the necessary water and ammunition the weight will be increased to about 190 pounds. This is considerably less than the maximum of 250 pounds prescribed as the limiting load factor in the instructions for conducting the test.

The original body design furnished with the eight experimental carts was found to be unsuitable and it became necessary to develop something different. It was the consensus of opinion, during and after the armory and field tests, that the body for the light cart should conform as nearly as possible with that of the present type. Such a body would accustom the personnel to putting the equipment in relatively the same positions as in the present cart. It was deemed fundamentally wrong to teach one way of loading in peace time with the light type and a

Total..... 11,913



different method in war with the heavy cart. With this in view, the Militia Bureau has completed a new tentative design based upon the results of the tests, which will resemble in general appearance the Vickers cart. In the tentative design a light, covered gun box has been placed on one side of the body bed, an ammunition rack in the center and a space with holding straps on the other side for the tripod. A small covered compartment is provided for storage at the front end of the ammunition rack. In front of the rack on the body bed a space has been provided, with a retaining strap, for the paulin and spare parts box. In addition to these changes, the body has been shortened about eight inches, to reduce the weight and improve the balance.

It was the unanimous opinion, as shown by the test reports received during the armory and field training periods, that a light cart would prove the solution to the armory drill problems of machine gun units of the National Guard. However, as early as the first month of the test, January, 1927, it was determined that the cart as delivered was not suitable and that many changes would be necessary before it could be considered a solution. During the later field training tests a number of improvements were worked out, all of which have been incorporated in the tentative composite design prepared by the Militia Bureau for the construction of some additional experimental carts. It is hoped to conduct further field tests with some of the new designs during the coming summer. These improvements include those already mentioned above, as well as others explained in the following paragraphs.

The field tests fully demonstrated the value of the light type of cart for any kind of training normally conducted during the field training of the National Guard. It was developed, however, that the light cart could not be termed wholly a two-man load except on good roads or for short distances over bad ground. By using pull ropes and breast straps issued to the howitzer company and adding two men to the pulling team when necessary, no further difficulty was encountered in pulling the carts over any kind of road or terrain. In view of this, these pull ropes have been included in the load to be carried. It was also found that considerable strain was placed on the men at the cross bar of the towing handle when going down hill. This was overcome by attaching short ropes to the rear corners of the cart and having two men who marched behind the cart hold back on the cart. To accommodate the pulling and caking ropes, attachments have been provided on the frame in the tentative design of the new carts. The field training phase of the tests was so generally successful that little doubt exists that the new carts, when finally completed, will entirely eliminate the need for hired animals. This alone should prove a great advantage in view of the numerous injuries, as well as damage to equipment, which usually results from the use of such animals.

The serviceability of the Infantry T 1 cart, which was used as the basis for the original tests, was thoroughly demonstrated. The running gear, or chassis, of this cart is made of light

angle iron, welded and braced, and is a strong and durable vehicle. During nearly a year of use, the eight original carts have not developed a single structural weakness, nor have any repairs been necessary. In the tentative design for the new experimental carts, the chassis design will not be changed, except, perhaps, for a slight alteration in the front and to improve the appearance and effect a small reduction in weight.

The effect of the cart upon the personnel using it was one of the most pleasing results of the test. Everyone was enthusiastic over the prospect of adopting a light, hand-drawn cart which would eliminate the present irksome duty of caring for and breaking in green animals. A canvass of the members of the testing units showed a strong sentiment in favor of the immediate adoption of a light cart for the use of the National Guard.

There was only limited opportunity for testing the towing qualities of the light cart behind escort wagons or trucks. Such tests as were conducted were made with an improvised towing device, for none had been provided on the carts. However, behind an automobile, speeds up to 35 miles an hour were attained with full success in so far as the cart was concerned. There was considerable noise and rattle, but this was because of the lack of suitable means for attaching the load to the cart. These defects have been overcome in the tentative design prepared as a result of the tests, in which provision is made for a practical towing device and straps and cleats for securing the load. There is little doubt that with a suitable towing device any normal speed can be maintained with the light cart.

The above paragraphs cover briefly the results under the several test items included in the original test instructions. A few general defects that came to light are also worth noting.

The wheel furnished with the cart is the same type as that of the R L 16 reel cart. The wheel proper proved entirely satisfactory, but the tire has a sharp, raised center tread which cuts easily into soft earth, sand and mud, and has a braking effect which increases the difficulty of pulling the cart. It is hoped to overcome this defect by developing a tire with a broader and flatter surface to improve the traction under all conditions.

The axles furnished with the cart were too short and brought the wheels very close to the sides of the frame. This caused weeds and dry grass to catch between the wheels and body, which also created a braking effect and increased the difficulty of pulling the cart across country. This has been overcome by lengthening the axles so as to provide at least ¾-inch clearance between the wheel and body.

The cart lacked means for keeping it in an upright position while at rest, which has been corrected in the tentative design by the addition of a short leg attached to the under side of the towing pole, which is on the present heavy cart.

The new design also calls for improvement of the balance of the cart, as a result of tests with the full new load.

No means were provided in the original cart to compensate for irregularities in the ground, which frequent-

ly forced up one side or the other and caused a wrenching action on the wrists of the men. This will be largely overcome in the new experimental carts by providing a free rotating movement between the end of the towing handle and the cross-bar fitting, with stops to permit holding the cart before it reaches an angle such that will turnover.

The original carts provided for hand draft in the same manner as the heavy cart, by passing a bar through eyelets on the shafts. It was found that this imposed too great a burden upon the towing personnel and, in the new design, it is replaced by a light single pole attachment with a cross fitting for either hand or vehicle draft. This has an offset which permits the cart ride in a horizontal position men of average height.

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# Military Health

IS there a fever of discontent in the 'Steenth Infantry? Well, study the temperature charts—the strength returns and inspection report—and find out when it started. Perhaps it is some officer performing his work indifferently well, which may require merely the stimulus of criticism, or perhaps a major operation such as an amputation. It is the necessity for these major operations that turns the inspector's hair gray. . . .

Is there a soldier in your squad whose uniform is dirty or does not fit? Mark him! There is the beginning of ill health here. Is there a soldier in your squad who does not salute promptly or does not obey cheerfully? Apply the remedies at once, for that is a malignant infection that will require immediate action to prevent its spread. Perhaps there is a listless anaemic soldier whose drill attendance record shows a failing interest. Give him a tonic that will arouse his flagging energy. For these are basic things—first, neatness in wearing the uniform; second, prompt cheerful obedience; third, regular drill attendance.

If you have these three virtues in your squad you have "military health." If you do not have them, there is no one to blame except the squad, section, and platoon leader and the company, battalion, regimental, brigade and division commander. It is apparent to everyone when an organization is in ill health. In fact, it is so common that old fashioned remedies are usually applied and are sufficient to cure. Personal instruction and advice is the first to be applied. A wise, experienced squad leader will seldom need any other remedy to keep his squad in health. However, there is another which to my mind should be applied more often. This is company punishment, an old fashioned remedy. Always in an armory, there is need of sweeping and dusting and scrubbing. Why not use this as company punishment for the delinquent soldier? In accordance with the regulations give him the option of performing the com-

pany punishment or standing trial by court-martial.

Elbert Hubbard said, "Responsibilities gravitate to those who can shoulder them and power flows to the man who knows how." So, Mr. Private Soldier, preserve your own personal military health, maintain yourself in the three basic virtues mentioned, and you will be rewarded. The reward for good work is more work and more responsibility. And if you continue in military health you will grow big enough and strong enough to command 20,000 men and to have a big anti-tank rifle just outside your door, as does our division commander. The consciousness of work well done will be your greatest pleasure, "but what is more, my son, you will be a man."—*Lt. Col. William Zierdt, Headquarters 28th Division, Penn. N. G., in the Keystone.*

## "Deadwood"—Detriment to the Guard

FROM time to time we admonish companies that "deadwood" or inactive members must be eliminated from the rolls. Small wonder that some units cannot maintain an "excellent" or "very satisfactory" rating if a good percentage of the names on the rolls are those of inactive men.

Proof that some units are carrying inactive men was given to the *California Guardsman* with the submission to the magazine of a new list of names and addresses. More than 2000 new names were added to the address list of the magazine, and of the 2000 copies mailed to these new names for the month of October, 200 copies were returned to the postoffice unclaimed, due to the fact that the men no longer resided in the particular city.

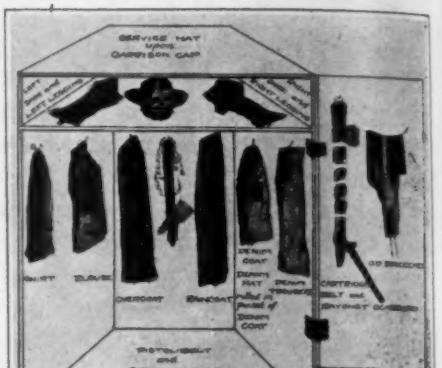
Rid your units of the deadwood—do it now before Federal inspections, so that the record of this State will be better than ever before in history.—*The California Guardsman.*

## Dressing up the Locker

REGIMENTS and other units quartered in armories where small and antiquated clothes-lockers are to be used will find the arrangement of U. S. property shown in the sketch on the next page of help. It will not only simplify the task of counting property but, at the same time, enables men to change into and from their uniforms with a minimum of time and effort in keeping the locker well dressed. The plan is based upon the observation of the habits of the men by Lieut. Peter Roedynko, New York National Guard.

During the period of observation he found that the men, when about to change, first reach for the "O. D." breeches, leggings and shoes. Therefore, the breeches have been placed on a cord on the inside of the door, where they are easily accessible and at the

same time, provide upon their removal, a place where the civilian trousers can be hung to preserve their crease. The same refers to the shoes, which are placed on top of the shelf in the center of the locker. The "O. D." shirt follows next, and therefore it is placed on the first hook on the left of the locker with the blouse directly in rear. In case denims are to be worn, exactly the same arrangement has been provided for on the right of the locker. The last items to be put on, or, after drill, the first ones to be removed, are the hat and the cartridge or pistol belt. These items, therefore, have been placed in positions where they can be reached without disturbing the other articles already in the locker.



VIEW OF PROPERLY DRESSED LOCKER

In many cases hooks have been found to be missing in these old fashioned lockers. These can be replaced with white enameled clothes hooks, obtainable at any five and ten-cent store at a nickel for two hooks. The white enamel of these hooks makes them easily visible, even in dimly lit dressing rooms or obscure corners. It has been demonstrated by practical tests that it takes a man less than five minutes to change, and still keep his locker in the order outlined in the sketch, if the above described sequence in the order of dressing is observed.—*The New York National Guardsman.*

# 100 Per Cent Enrollment

THE officers of the National Guard of Porto Rico, of which Col. William L. Reed, Infantry, D. O. L., is the senior instructor, have enrolled 100 per cent in the correspondence courses, 1927-28.

The Guard consists of the State Staff, the 295th Infantry, and the 1st Battalion, 296th Infantry.

The members of the staff are taking special branch courses; the field officers, the infantry advanced courses; the captains and lieutenants, the infantry company officers' and infantry basic courses, respectively. The Medical and dental officers are taking the special chemical warfare course.

Even the Regular Army instructors are 100 per cent enrolled. The senior instructor is taking the command and staff course, and his two assistants (captains), the infantry advanced courses.

This is evidence of real desire for professional education and improvement.

# Reserve, Guard, Regulars—We Are One Army

THE National Convention of the Reserve Officers' Association, which met in Milwaukee in October, accomplished in the course of a very thoughtful and purposeful meet a bit of legislative action which is worthy of attention by officers of all components.

The convention altered the constitution to provide that Reserve officers who hold commissions in the National Guard of the 48 States and the District of Columbia may be members of the Reserve Officers' Association with full voting and office-holding privileges.

It is well for all to be familiar with the existing policy regarding National Guard officers. The National Guard is a part of the Army of the United States, only if and when inducted into Federal service. At other times it is a State force only. The machinery of federalization in the event of an emergency is a somewhat slow and intricate one, and in order to make it possible for Guard officers to be inducted easily and rapidly into Federal service provision has been made for these officers to hold Reserve commissions concurrently with their Guard commissions. It is probable that, before long, a special form of commission, distinct from the Reserve commission, will be provided by the War Department for the purpose of accomplishing the desired elasticity of federalization. But for the present, the Reserve commission, awarded in the branch and grade of the officer's Guard assignment, is the only means available for his peace-time affiliation with the Army of the United States. More than eight thousand of the twelve thousand Guard officers hold these dual commissions.

Now, some objection has been raised to the admission of these officers into full brotherhood in the Reserve Association. The arguments have been advanced: That the Guardsman has his own organization through which he can operate for all the things he requires; that the problems of the Reserve Corps are peculiar to the corps, and not of interest to Guardsmen; that the objectives of the Reserve Association are embarrassed by the presence of representatives of another component; and that the association is weakened rather than strengthened by the membership of Guardsmen. The convention listened thoughtfully to all of these arguments, sincerely adduced, and then voted them inadequate by admitting Guardsmen Reservists to membership.

What caused the convention to take this action? Principally, the interesting and cumulative evidence of a delightful, widespread and whole hearted spirit of helpfulness and cooperation and support which Guardsmen are showing toward the Reserve component. For example, in Wisconsin, Guard officers have brought into existence and are nursing along toward success a number of live and going R. O. A. chapters. In one or two instances, Guardsmen Reservists comprised most of the membership of live Reserve chapters, and the president of one of the best chapters is a Guard officer.

Nor has it been found in any one of the many instances of Guard officer

participation in Reserve Association activities that the Guardsmen has ever utilized or attempted to utilize his Reserve affiliations to accomplish National Guard objectives.

In short, these fine Guardsmen Reservists have merely been carrying two loads instead of one; they have been performing the considerable work of Guard unit commanders, and at the same time have taken seriously and capably to heart their obligation to the third component.

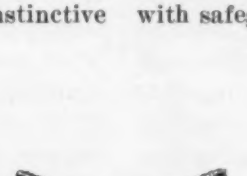
In many instances, the comradeship that has resulted has led local Guard organizations to proffer to the Organized Reserve units its various training and study facilities and programs. Again, for example, the 160th Infantry of Los Angeles has thrown open its armory doors to the local Reserve regiments, who have thus been afforded facilities that they could not otherwise have had. In other localities, as stated before, the Reserve chapter exists and works splendidly almost solely by reason of Guard officer assistance.

There was a time, easily within the memory of men much younger than the writer, when Regular officers and Guard officers, traveling on the same Army transport, separated into two groups with the same instinctive antipathy that characterizes the habits of oil and water, and each group employed itself in giving the other the illy concealed "razzberry."

"Them days have gone forever;" the Guard has written so considerable a portion of the military history of the U. S. A. since 1915 that the Regular has come to take him at his face value and to help him in all feasible ways to enhance that value, and the Guardsman has in turn come to look upon his Regular Army colleague as a monitor, friend and guide.

The Reserve Corps, the third component, is the baby of the National Defense family, and it is but natural to expect the appearance of childhood maladies. But the two other members of the family, familiar with their own former growing pains, are manifesting a delightful desire to assist the youngster to adolescence by every means in their power.

And the Reserve itself, profiting by the experience of the older members, is on the whole manifesting a healthy eagerness to take its full place in the nation's safety trio. It is the old story of the soldiers three, "one for all and all for one." And the steady development of this ideal is one of the most reassuring facts within the field of view of the man who is concerned with safeguarding his Republic.



# The Organized Reserves

## Contact Camps

THE Contact Camp idea seems to be growing. Out of a considerable number of reports of such camps which have come to the INFANTRY JOURNAL desk, we select two for particular mention for the reason that they afford us examples of excellent, successful types of contact camp program. We may call the one type the "school" type and the other the "Chautauqua" type.

In October, 70 Reserve officers from Toledo, Fremont, Lima, Findlay and other nearby Ohio cities gathered at the Erie Proving Ground, Camp Perry, Ohio, for a two-day regimental problem. They were under the command of a Reservist, Colonel R. R. Groves of Findlay; and the instruction was directed by Lieut. Col. J. N. Walling of the Regular Army, stationed with the Organized Reserves in the Toledo headquarters.

The camp program was built around a regimental problem based upon the defense of the Erie Proving Ground terrain during the removal of military supplies therefrom under attack conditions. Opportunity was afforded for all officers to apply the situation to their particular unit's functions, as is, of course, the usual and logical procedure. While this two-day camp was distinctively a school camp, yet the program was made varied and interesting by a formal lecture by Colonel Walling on "Methods of Instruction," and by addresses by Major General Dennis A. Nolan, commanding the 5th Corps Area; Colonel Mathew C. Smith, in charge of the 5th Corps Area Reserve activities, and Colonel Pierce A. Murphy, Chief of Staff of the 83d Division. In addition, time was found for a bit of pistol practice on Camp Perry's excellent range.

An example of the "Chautauqua" type of contact camp is given us in the report in the *78th Division Gazette* of the contact "Camp Shuttleworth," held at Sea Girt, N. J., August 18 to 22. We quote from the *Gazette:*

"We have from the first been in favor of the contact camp being more of a Chautauqua than a training camp, so this year an effort was made to secure and present some one who had a message of particular interest to Reserve officers."

Then the *Gazette* enumerates the several interesting and instructive speakers, among whom were Brig. Gen. H. A. Drum, Col. D. L. Stone and Col. W. S. McNair.

To round out the program, attending chaplains conducted inspiring divine services on Sunday morning, reunions of veterans' organizations were held and the officers of the several Reserve units gathered together to perfect plans for the winter programs of these units.

The reports from these two camps attest the fact of their popularity. Each type has its place in the scheme of Reserve organization, esprit and training.

# The Reservist and the R. O. T. C.

WHEN did your local Reserve chapter last visit your nearby high school or college R. O. T. C. unit? How long has it been since your chapter spread a get-together feed to which you invited the cadet officers, noncommissioned officers, school faculty and military instructors?

When did the Reservists of your town put up a prize for the best trained R. O. T. C. unit? Or for the most outstanding cadet?

Do you believe that the future of the third component depends upon its chief procurement source, the R. O. T. C.?

Is the Reservist's duty done when he has collected, in one way or another, 200 hours' worth of pretty, pink attendance tickets each half decade?

Does the local R. O. T. C. unit know that the Reserve officers of their community are standing back of it to the last man, interested in it, supporting it, fighting for it?

# Armistice Day Celebrations

A CONSIDERABLE number of 1927 Armistice Day celebrations, east, west, north and south, were characterized by the participation of Reserve chapters, Reserve units or Reserve groups of various sorts. In all such cases which have been reported to the INFANTRY JOURNAL, the Reserve component appears to have gained both in spirit and in local prestige by such organized participation in this great holiday's observance. It is recognized that the live Reserve officer is also in many instances, an active Legionnaire, Rotarian, Chamber of Commerce member, and what not; and that on this account he sometimes finds it hard to choose with which organization he should labor and turn out in parade or public service.

It is an excellent thing that this is so; the influence of the Reservist in the many civic bodies in which he is active can be most potent for the upbuilding of a national sense of obligation to support the nation's functions, defense and other.

But the community, too little accustomed to the helpful demonstration of unselfish mass interest in National Defense, is afforded an incalculably beneficial stimulus by the occasional spectacle of their business, fraternal, church and social acquaintances publicly assembled to attest their devotion to the organized peace establishment.

On 360 days in the year spread the influence of your patriotism in the lodge, the veteran society, the civic club, the business club, the church, the factory and the store; but four or five times a year join with your fellow-Reservists in an organized, unanimous public testimony to the cause to which you are committed.

And see to it that everybody who sees you is afforded an opportunity to learn what it is all about. "Give a reason for the faith that is in you." "The wise man hideth not his light under a bushel."

# VII Corps Area Reserve Advisory Board

THE VII Corps Area has announced the following policy governing the selection of Reserve officers to serve on the Corps Area Advisory Board:

"It is the policy, in this Corps Area, to have the Board consist of the president of the VII Corps Area Reserve Officers' Association and the presidents of all the State Reserve Officers' Associations, their membership on the Board to coincide with their tenure of office as association president."

This policy, which has already been put into operation by the appointment of the several VII Corps Area Reservists concerned, will have the excellent effect of linking up the several Reserve associations intimately with the corps area commander and his office.

It is but another evidence of the policy of the Regular Army to institute and to maintain that liaison with the civilian components which will be helpful to all components, and to the National Defense as a whole.

# Notes From the Field

FLORIDA—JACKSONVILLE

"Lieut. Col. Raymond Sanderson, Med.-Res., was elected president of the Jacksonville Chapter of the United States Army Reserve Officers' Association at the annual meeting and banquet of the organization recently at the Hotel George Washington. He will hold office for a year.

"The meeting was attended by more than 75 Reserve officers, filling the banquet room of the hotel.

"Other officers elected were Major Robert L. Seitner, Q.M.-Res., first vice-president; Lieut. Col. Chester Wilson, Inf.-Res., second vice-president; Major Lynwood Evans, Med.-Res., third vice-president; Capt. Sterling A. Wood, Inf., secretary; and 1st Lieut. Wilfred T. Coates, DF.-Res., treasurer.

"The Jacksonville chapter holds a regular luncheon meeting every Thursday at the Hotel George Washington, which is attended by many officers and former officers in the city and district."

CALIFORNIA—LOS ANGELES

Lieut. Col. David J. Brady has been elected president of the 42d (Rainbow) Division Association of Los Angeles.

MICHIGAN—CAMP CUSTER

A moonlight terrain exercise, participated in by Reservists of Battle Creek, Kalamazoo and vicinity, was conducted recently. The problem presented was the securing of a Kalamazoo River crossing by a Blue brigade.

OKLAHOMA—ARDMORE

Col. H. B. Fell, the recently elected president of the Oklahoma Department, R. O. A., brings to the presidency a long and brilliant record of purposeful labors in behalf of the third component and the military establishment.

KANSAS—INDEPENDENCE

The state convention and annual election of the Kansas Department, R. O. A., was held at Independence, Kan., September 14 and 15, and proved to be one of the most successful meetings of the kind yet held in the State. At the conclusion of the business sessions, the following department officers were elected for the ensuing year: President, Capt. R. W. Getty, Inf.-Res., Downs, Kan.; Vice-President, Lieut. Col. F. W. Shelton, Med.-Res., Independence, Kan.; Secretary, 1st Lieut. F. W. Johnson, F.A. Res., Downs, Kan.; Treasurer, Major J. D. Pettet, Med.-Res., Arcadia, Kan.

NORTH DAKOTA—MINOT

The Department of North Dakota meeting was held at Minot, N. D., October 5, 1927. The following officers were elected for the ensuing year: President, Col. E. S. Person, Cav.-Res., Minot, N. D.; Vice-President, Major H. H. McCullough, Inf.-Res., Washburn, N. D.; Secretary-Treasurer, 2d Lieut. B. A. Balerud, F.A.-Res., Minot, N. D.; delegate to the National Convention, Col. E. S. Person, Cav.-Res.

# Kansas City Reservists Occupy Their Own New Building

MENTION has been made before of the zeal and the businesslike activity of the Kansas City (Mo.) Reservists. In November these forehanded folk moved their household goods into their own fine new building at 3614-16 Main street, Kansas City, Mo. This building is the outgrowth of an idea, as all buildings are. The idea in this instance was that a great group of representative citizens, united for a common patriotic purpose, should have a headquarters for their organization and activities. Without going into details, suffice to say that the Reservists of Kansas City have a fine building, with ample offices, club rooms, class rooms, locker rooms and all other needful appurtenances. It is interesting to note that this building has a closed runway which connects it with the Armory of the famous Kansas City National Guard regiment of Engineers; and the liaison between the Guard and the Reserves in this midwest metropolis is truly typified by this convenient Siamese-twin connecting corridor. "United we stand, divided we fall," is old stuff, but, like many an old saying, it is both true and often disregarded. Kansas City Reservedom is healthy; Kansas City Guarddom is healthy; and part of the reason for this dual health is found in the practice of a real and a strategic fraternity.

# The 316th Infantry Coat of Arms

THE 316th Infantry has just completed the steps necessary to adoption and approval of a coat of arms. Col. H. Harrison Smith, who commands the regiment, has had printed a leaflet that describes the new coat of arms. After setting forth a description of the coat of arms in heraldic terms, the leaflet goes on to tell about it in every-day language. This description is quite unusual, for it also narrates most interestingly a bit of history.

It reads:

The shield is blue for Infantry. Blue, in heraldry, signifies loyalty and integrity.

The crusaders' sword is symbolic of the crusade on which the 316th embarked to save the civilization of the world. It shows the very reason for the creation of the regiment.

In heraldry, the sword is the emblem of military honor. Guillem, an ancient herald, says: "It should incite the bearer to a just and generous pursuit of honor and virtue in warlike deeds." Its position, upright in the center of the shield, with the point up, denotes military strength and fortitude. The blade is of silver and the hilt of gold.

Across the center of the shield, partly concealing the blade of the sword, is a silver band or "fess" on which is a picture of Hill 378. The "fess" represents a military belt or girdle of honor.

Hill 378, shown also on the map as La Borne de Cornouille, known to the French as La Grande Montagne and to the doughboys of the 316th as Cornwilly Hill, was captured and held by the 316th after three days of heavy fighting, November 4, 5 and 6, 1918. For this the regiment was cited for gallantry, and the division commander, Maj. Gen. Joseph E. Kuhn, referring to this exploit, said: "The 316th has done the impossible."

The hill is of gold for glory and sacrifice, as exampled by the gold of the service stars. The woods to the right and left, and in front of, and on the hill, are black, and symbolize the dangers and difficulties through which the regiment passed before capturing the hill. The narrow road on the right and the sky are of silver gray, as they looked in November, 1918.

In the center of the upper portion of the shield is a mount or hilltop on which is perched a falcon, both of gold. They are taken from the coat of arms of Montfaucon (Mount Falcon) and symbolize the participation

by the 316th Infantry in the capture of that stronghold.

Montfaucon was the highest point held by the Germans on the American front. From there the German Crown Prince had watched, through a periscope, the great battle of Verdun. The hill was strongly fortified. The Germans had held it for four years against all assaults by the French and believed it to be impregnable. It was captured by the 79th Division before noon on September 27, 1918, the second day of the battle.

It will be noted that the point of sword extends beyond the head of the falcon. This symbolizes the fact that the 316th Infantry made the farthest advance beyond Montfaucon of any unit of the 79th Division, and more than that, as the operation maps in the War Department at Washington show, the 316th Infantry on the afternoon of September 29, 1918, had penetrated farther into the enemy lines than any other element of the nine American divisions in the battle that day.

The mount and the falcon are flanked by six crosses of gold. They are of a kind known in heraldry as "cross crosslets fitchee." A "cross crosslet" is a small plain cross crossed at the end of each arm. "Fitchee" is a term applied to crosses when the lower branch ends in a sharp point. Such crosses were carried by the soldiers in the crusades. They were sharpened so they could be fixed upright in the ground during worship.

These six crosses are taken from the coat of arms of the Department of the Meuse, where the regiment served. They are in memory of our glorious dead.

In the lower portion of the shield are three "alerions," of gold, the center one slightly raised above the other two. An "alerion" is an eagle that has been disarmed—that is, it has no beak or talons.

These three "alerions" are taken from the coat of arms of the Province of Lorraine and symbolize the service of the regiment there.

The coat of arms of the Province of Lorraine was adopted from the arms of Sir Godfrey de Bouillon, a famous knight who lived in that province and who became one of the great leaders in the First Crusade.

In the year 1096, when the princes and knights of Europe were assembling their forces for the First Crusade, Sir Godfrey de Bouillon led the Crusaders of Lorraine, some 40,000 strong, southeastward along "the road of Charlemagne" to Constantinople, the meeting place, where he was the first to arrive in December of that year.

By the spring of 1097 a great army of Crusaders, estimated variously at from 300,000 to 600,000 men, had assembled, and the march to Jerusalem was begun. After two years of marching and constant fighting against the Turks, Jerusalem was reached and besieged by the Crusaders in the middle of May, 1099.

History, or legend, relates that Sir Godfrey de Bouillon one day, while standing with his knights before the walls of the city, fitted an arrow to his bow and shot it toward the Tower of David, used as a watch tower by the enemy. The arrow in its flight pierced three eagles, which fell to the ground impaled on the shaft. Sir Godfrey accepted this as an omen of

good fortune and at once ordered an attack to be made. He was successful; a breach was made in the walls, and Jerusalem was captured. (July 15, 1099.)

Sir Godfrey was elected ruler of Jerusalem and assumed the title not of king but of "advocate" or protector of the Holy Sepulchre. He adopted as the device, or coat of arms, on his shield the three eagles he had pierced with his arrow, but without beaks or talons, to show that they had been struck down in their flight, conquered and disarmed, that they might ever be for him an emblem of good fortune.

Likewise the 316th Infantry, themselves "Crusaders of Lorraine," take these three "alerions" of Sir Godfrey's shield as an emblem of good fortune for the regiment.

The "alerions" have a still further significance for the 316th, for in the heraldry of nations that have defeated the Germans in battle, they are used to represent the German eagle defeated and disarmed. For the 316th Infantry, therefore, the three "alerions" symbolize the three defeats inflicted by the regiment on the German arms at Montfaucon, at Troyon and at Hill 378.

The crest is that prescribed by the War Department for all regiments of the Organized Reserve. It is the Lexington Minute Man depicted in natural colors.

The minute men of the Revolution, who stood ready to defend their country on an instant's call, were the forerunners of the Reserve Corps of today.

The statue of the Minute Man, by Capt. John Parker, H. H. Kitson, sculptor, stands on the Common in Lexington, Mass.

The motto is derived from the knights' "cri de guerre," or battle cry, of olden days.

"We Dare"—the courageous and inspiring motto of the 316th exemplifies the spirit of the regiment—the courage and daring that carried it to victory at Montfaucon, at Troyon and at Hill 378, and which brought to the regiment the highest praise of its commanding general when he said on November 6, 1918: "The 316th has done the impossible."

# Books

## As They Passed Through the Port

"As They Passed Through the Port," by Maj. Gen. David C. Shanks, United States Army, retired. The Cary Publishing Company, Washington, 1927. $3.00.

"As They Passed Through the Port" recounts the operations of the Hoboken (N. J.) Port of Embarkation, and gives the author's experiences while he was in command there in 1917-18. No one in the country is better qualifie than General Shanks to describe the departure and return of the streams of men which America poured into France. In collecting material for the book, the author did not rely upon his memory alone, nor did he confine his researches to dry, official records. He drew upon the experiences of hundreds of Army and Navy officers, soldiers, civilians and welfare workers who passed through or were employed in the Port of Embarkation.

The result is a document covering a phase of our war effort which has hitherto been overlooked. The book contains numerous incidents, some comic, some pathetic, but all human and interesting. To illustrate: "With 40,000 men in camp an anxious girl arrives and asks, 'Where is Frank Begonski?'—'No, I don't know what corpse he belongs to, but he is kind of tall, with a dark, smooth face. Don't you know him? And *you* claim to be an Information Bureau?'" The book also contains a large number of photographs, showing departure and return of troops, and many of the people who were responsible for the uninterrupted procession of American soldiers to France.

"As They Passed Through the Port" is a book over which a person may spend several pleasant hours. As a non-technical account, the pages of which are filled with people and personalities, it brings back to our memories very vividly those exciting days of Liberty Bonds and rumors. The entire book bespeaks the kindly philosophy and sympathetic understanding of its distinguished author.

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## "Navies and Nations"

"Navies and Nations": A review of naval developments since the Great War. The Houghton-Mifflin Company, Boston and New York.

In exhibiting the naval policies and problems of the post-war period the author, in the preface, cites the "well-sustained public interest" in the subject and the widespread misconception in England and the United States as to the policies and problems of the respective countries. He expresses the belief that candor is the surest antidote to misrepresentation. The subsequent treatment leaves nothing to be desired.

The reader is introduced to the evidence of renewed interest in sea power, its influence in the defeat of the German coalition in the World War and the part it played in outstanding political events of the post-war period.

Britain's naval policy, problems, defense and strategy, and the political, economic and strategic factors that

determine her naval policy are discussed in detail. The parts of the other members of the British Commonwealth of Nations in the determination of that policy and their contribution to its maintenance are disclosed. Full treatment is accorded the various factors involved in the development of the Naval Base at Singapore and its strategical influence.

In a chapter "Britain and America" the policy of the United States before the Naval Conference, its reaction on British and Japanese naval policies and the events that led to and prompted the Naval Conference are elucidated. The chapter tells of the reactions of the various nations to the commitments of their delegates to the conference, and the author sums up the advantages and disadvantages to the ratifying nations of the provisions of the treaty, and its modifying influence on naval policies.

Japanese and French naval policies and the national aims, strategical, economic and other factors that influence and determine their respective policies are treated in full. Italian ambitions, the German Navy, and the efforts of Germany to secure removal of the limitations imposed by the Versailles Treaty, the policies of the lesser powers and their political aspects are included.

Much space is given to a comparative study of the armaments, ratios, and types of fighting ships of the powers.

The author's analysis of the political and economic factors behind the naval policies of nations is absorbing.

The book is to be recommended. It is broad in scope, clearly written and highly instructive.

## Documents Illustrating the History of Civilization in Medieval England (1066-1500)

"Documents Illustrating the History of Civilization in Medieval England (1066-1500)," by R. Trevor Davies. E. P. Dutton & Co., New York.

Under the assumption that chroniclers often "write with a purpose" and that most present-day textbooks of political history suffer from "prepossessions," the author believes that history should properly be studied from contemporary documents; that such method possesses greater educational value and opportunity for original thought.

The compilation that the author presents includes the documents commonly referred to in text-books of political history. The most important of them, such as Magna Charta, are included in their entirety; others in an abridged form.

The selection is excellent and gives a picture of medieval life that is more vivid and that is conducive to a better understanding of that civilization than most text-books.

The documents disclose the fact that conflicting interests of church and state, labor difficulties, taxation, and the clash of opinions which occupy so much of the space in our daily press find their exact parallels in medieval times. Then, as now, the liberals were hurling themselves against the solid wall of fundamentalism, a dangerous undertaking in those days as is evidenced by the sad fate of one William Sawtre, chaplain, convicted of heresy, who, it was determined, "as a manifest example" to other Christians, "ought to be burnt

in the flames according to law human and divine" and was so sentenced "in detestation of his crime."

William of Malmesbury's account of the Norman Conquest, an "Estimate of William the Conqueror" from the Anglo-Saxon Chronicle-Sub-anno 1807; Joinville's account of the Crusades; and documents that tell of the period of the Hundred Years' War are of interest to military men.

The documents as a whole give an illuminating insight into the political, economic and intellectual life and the state of civilization of the period that they cover.

It is refreshing to read from sources uninfluenced by the march of civilization, and from them to form one's own opinion. The book is worth reading.

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## Military Operations, France and Belgium, 1915

"Military Operations, France and Belgium, 1915"—Volume III, by direction of the Historical Section of the Committee of Imperial Defense. Compiled by Brig. Gen. J. E. Edmonds and Capt. G. C. Wynne. Macmillan & Co., Ltd., St. Martin's street, London. 12s, 6d, net. Separate case containing maps, 5s, 6d, net.

This is the third volume of the British official history of the World War. Although originally intended to include the whole war-year 1915, from the close of the "First Ypres" in November, 1914, to the dying down of the "Battle of Loos" in November, 1915, the author explains that a volume of too great bulk would have resulted, hence the inclusion only in this volume of the war period November, 1914, to May, 1915.

The volume contains an account of the winter of 1914-15 and of the Allied plans for the spring campaign in 1915; the expansion of the army and the development of the munitions supply up to the formation of the Ministry of Munitions; the battle of Neuve Chapelle and the battles of Ypres, 1915, which, beginning with the first gas attack on April 22, lasted until May 25.

Unpreparedness for war and shortage of ammunition are the motifs that run throughout the book, and the vital influence on operations of untrained troops, the terrible ammunition shortage, antiquated artillery, inexperienced officers and inexperienced and extemporized staffs.

The minute details of the narrative, accompanying maps and sketches and much valuable information obtained from the Germans as to what was happening on their side make the volume of value to the military student.

The volume may be considered an epic of the sacrifices and gallantry of the B. E. F. Also, although it is a history and was intended as such, it is a veritable bulwark of argument for preparedness, than which no work with preparedness as its theme could more vividly impress the reader.

The important field and operations orders, messages, British and German orders of battle, a calendar of principal events, places and names, and a bibliography are included. The index is excellent. The work is to be recommended to the military student. It is lucidly and graphically written, free from technical terms, possesses a strong and well-sustained narrative interest, and the author's adherence to fact is evident.

## The Cannoneers Have Hairy Ears

"THE CANNONEERS HAVE HAIRY EARS." Anonymous. J. H. Sears Co.

This book has just appeared as a companion narrative to that story of the S. O. S., "Wine, Women and War."

But the authorship of this excellent story of the two great American drives of the war is not destined to remain long in obscurity. In the first place, the writer is far too free with his personal allusions. And then when he talks of the old days on the Houston Post and the Chicago Inter-Ocean, and on top of that his early enlisted days in the artillery of the 33d Division at Camp Logan, Texas, his identity is no longer secret. The author of this latest diary is Bob Casey, a headline writer on the old Houston (Texas) Post back about 1915.

During those exceedingly warm days around Romagne-sur-Montfaucon, Casey made this observation: "The zone fire on the road has become almost unbearable. Why we are still here is just one of those things that make artillery puzzling. I can't help but think of what Harry Warner[1] once said about duck shooting: 'Sometimes you get a good close shot into a flock so thick that you ought to be able to kill half a dozen with one brick. And you don't hit a damned one.'"

This book is written in the style of the newspaper man. It does not possess the fine selection of words as do the stories from the pen of the likable Captain Thomasson. But we are going to say that this story of St. Mihiel and the Meuse-Argonne has few, if any, equals among epics of the war. Years at the reportorial desk have given Casey the ability to see with discerning eyes, and more than that to record his feelings with such unerring facility and clearness that the reader almost partakes of the same experiences.

"The Cannoneers Have Hairy Ears" goes down as a good story, well done, and calculated to give hours of genuine pleasure to its readers.

[1]One-time magazine editor of the Houston Post, and stalwart of Texas journalism.